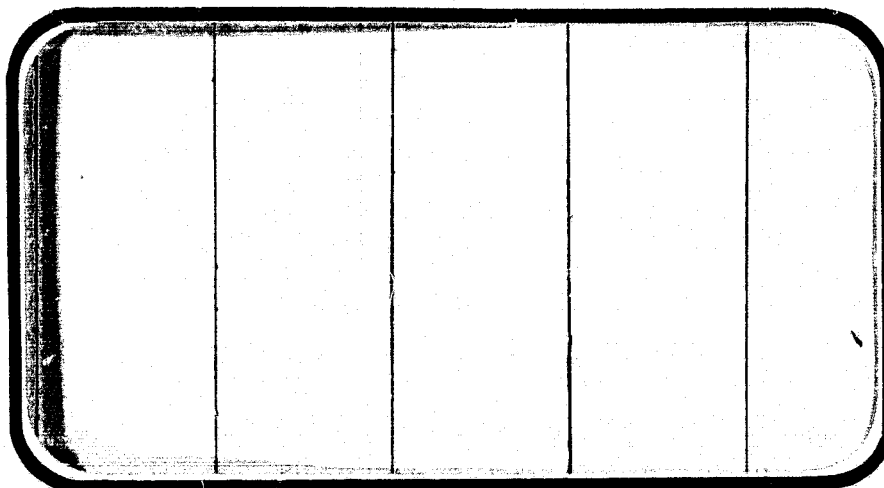


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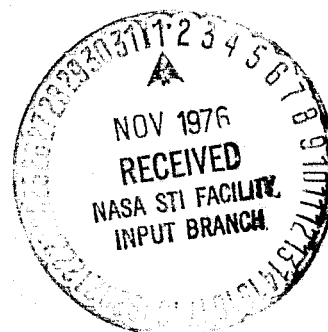
(NASA-CR-147632) INVESTIGATIONS OF THE
0.020-SCALE 88-OTS INTEGRATED SPACE SHUTTLE
VEHICLE JET-PLUME MODEL IN THE NASA/AMES
RESEARCH CENTER 11 BY 11-FOOT UNITARY PLAN
WIND TUNNEL (IA80), VOLUME 1 (Chrysler

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA Management services

SPACE DIVISION



**CHRYSLER
CORPORATION**

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VOLUME 1 OF 4
INVESTIGATIONS OF THE 0.020-SCALE 88-OTS
INTEGRATED SPACE SHUTTLE VEHICLE JET-PLUME MODEL
IN THE NASA/AMES RESEARCH CENTER
11 x 11-FOOT UNITARY PLAN WIND TUNNEL (IA80)

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Prepared under NASA Contract Number NAS9-13247

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Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: ARC 11-023
NASA Series Number: IA80
Model Number: 88-OTS
Test Dates: 4 through 8 November 1974
Occupancy Hours: 132

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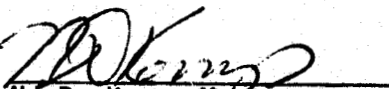
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Chrysler Corporation Space Division assumes no responsibility for the data presented other than display characteristics.

INVESTIGATIONS OF THE 0.020-SCALE 88-OTS
INTEGRATED SPACE SHUTTLE VEHICLE JET-PLUME MODEL
IN THE NASA/AMES RESEARCH CENTER
11 x 11-FOOT UNITARY PLAN WIND TUNNEL (IA80)

By

M. E. Nichols, Rockwell International Space Division

ABSTRACT

This report documents the results of jet-plume effects wind tunnel test IA80 of the 0.020-scale 88-OTS launch-configuration Space Shuttle Vehicle model in 11 x 11-foot leg of the NASA/Ames Research Center Unitary Plan Wind Tunnel. This test involved cold-gas Main Propulsion System and Solid Rocket - Motor plume simulations at Mach numbers from 0.6 to 1.4. IA80 was a continuation of a series of planned tests of plume effects, including IA19 and IA72. The test period was 4 through 8 November 1974, for 377 recorded runs.

The test-program objective was to determine integrated vehicle surface-pressure distributions, elevon and rudder hinge moments, and wing and vertical-tail root bending and torsional moments due to MPS and SRB plume interactions. Nozzle power conditions were controlled per pretest nozzle calibrations carried out by Rockwell International.

Model angle-of-attack was varied from -4° to $+4^{\circ}$; model angle-of-sideslip was varied from -4° to $+4^{\circ}$. Reynolds number was varied for certain test conditions and configurations, with the nominal freestream total pressure being 14.69 psia.

ABSTRACT (Concluded)

This report consists of 4 volumes of force and pressure data. They are arranged in the following manner:

VOLUME NUMBER	CONTENTS
1	IA80 Plotted Force and Pressure Data
2	IA80 Tabulated Force Data
	IA80 Tabulated Pressure Data in Force Format
	(a) orbiter base pages 164-221
	(b) orbiter fuselage pages 222-954
3	IA80 Tabulated Pressure Data
	(a) orbiter fuselage pages 1-248
	(b) orbiter bodyflap upper surface pages 249-496
	(c) orbiter bodyflap lower surface pages 497-744
4	IA80 Tabulated Pressure Data
	(a) external tank pages 745-992
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136	PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 0.9	ALPHA, BETA, XB/LB	U	787-792
137	PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 1.1	ALPHA, BETA, XB/LB	U	793-798

INDEX OF DATA FIGURES (Continued)

FIGURE NUMBER	TITLE	CONDITIONS VARYING	PLOTTED COEFFICIENTS SCHEDULE	PAGE
138	PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 1.25	ALPHA, BETA, XB/LB	U	799-804
139	PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH = 1.4	ALPHA, BETA, XB/LB	U	805-810

PLOTTED COEFFICIENTS SCHEDULE:

- (A) CBMW, CTMW, CNW versus ALPHA
- (B) CHEI, CHEO versus ALPHA
- (C) CBMV, CTMV, CYV versus BETA
- (D) CHR versus BETA
- (E) CBMW, CTMW, CNW versus BETA
- (F) CHEI, CHEO versus BETA
- (G) CBMW, CTMW, CNW versus MACH NUMBER
- (H) DCBMW, DCTMW, DCNW versus MACH NUMBER
- (I) DCBMWE, DCTMWE, DCNWE versus MACH NUMBER
- (J) CHEI, CHEO versus MACH NUMBER
- (K) DCHEI, DCHEO versus MACH NUMBER
- (L) DCHEIE, DCHEOE versus MACH NUMBER

INDEX OF DATA FIGURES (Concluded)

- (M) DCHR versus MACH NUMBER
- (N) DCMBV, DCTMV, DCYV versus MACH NUMBER
- (O) DXWCP, DYWCP versus MACH NUMBER
- (P) DXVCP, DZVCP versus MACH NUMBER
- (Q) CP versus MACH NUMBER
- (R) CP#AV versus MACH NUMBER
- (S) DCP#A versus MACH NUMBER
- (T) CP versus R/ROD
- (U) CP versus PHI

NOMENCLATURE

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
b	BREF	span of wing, in
b_V		span of vertical tail, in
BM_V		vertical tail-root bending moment (about vertical tail reference center), in-lb
BM_{V_O}		vertical tail-root bending moment at outboard gauge, in-lb
BM_{V_I}		vertical tail-root bending moment at inboard gauge, in-lb
BM_W		wing-root bending moment (about wing reference center), in-lb
BM_{W_I}		wing-root bending moment at inboard gauge, in-lb
BM_{W_O}		wing-root bending moment at outboard gauge, in-lb
\bar{c}	LREF	MAC of wing, in
C_{B_V}	CBMV	vertical tail-root bending-moment coefficient
C_{B_W}	CBMW	wing-root bending-moment coefficient
\bar{c}_E		MAC of total elevator panel, in
$C_{H_{E_I}}$	CHEI	hinge-moment coefficient for inboard elevator
$C_{H_{E_O}}$	CHEO	hinge-moment coefficient for outboard elevator
$C_{H_{E_T}}$	CHET	total elevator hinge-moment coefficient

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
C_{H_R}	CHR	hinge-moment coefficient for rudder
C_{N_W}	CNW	wing normal-force coefficient
C_{P_i}	CPi	pressure coefficient for model surface tap i
CPR_j		chamber-pressure ratio for nozzle j
\bar{c}_R		MAC of rudder panel, in
C_{T_V}	CTMV	vertical tail-root twisting-moment coefficient
C_{T_W}	CTMW	wing-root torsion-moment coefficient
\bar{c}_V		MAC of vertical tail, in
C_{Y_V}	CYV	vertical-tail side-force coefficient
EPR_j		exit-pressure ratio for nozzle j
ET		External Tank
HM_{E_I}		hinge moment of inboard elevon, in-lb
HM_{E_O}		hinge moment of outboard elevon, in-lb
HM_R		hinge moment of rudder, in-lb
M	MACH	freestream Mach number
MPS		Main Propulsion System
N		nominal

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
OTS		Orbiter + Tank + SRB
P_{c_j}		chamber pressure (absolute) of nozzle j
P_{cSRM}		SRM supply total pressure, psia (as set)
P_{cMPS}		MPS supply total pressure, psia (as set)
P_{e_j}		exit pressure (absolute) of nozzle j
P_i		pressure (absolute) at model surface tap i
P_T		freestream total pressure, psia
P_∞		freestream static pressure, psia
q	Q(PSF)	freestream dynamic pressure, psf
Re/ft	RN/L	freestream unit Reynolds number, ft^{-1}
S	SREF	reference wing area, ft^2
SRB		Solid Rocket Booster
SRM		Solid Rocket Motor
SSME		Space Shuttle Main Engine
S_E		reference elevon area, ft^2
S_R		reference rudder area, ft^2
S_V		reference vertical tail area, ft^2
TM_V		vertical tail-root torsional moment (about vertical tail reference center), in-lb
TM_{V_G}		vertical tail-root torsional moment at gauge, in-lb

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
TM_W		wing-root torsional moment (about wing reference center), in-lb
TM_{WG}		wing-root torsional moment at gauge, in-lb
$T_{T_{MPS}}$		MPS supply total temperature, °R
$T_{T_{SRM}}$		SRM supply total temperature, °R
T_T		freestream total temperature, °R
T_∞		freestream static temperature, °R
X_{CP_V}	XVCP	vertical tail center-of-pressure, longitudinal location, in
X_{CP_W}	XWCP	wing center-of-pressure, longitudinal location, in
X_N		Orbiter nose station, in
$X_{TM_{VG}}$		longitudinal location of vertical tail-root torsional gauge, in
$X_{TM_{WG}}$		longitudinal location of wing-root torsional gauge, in
X_{VRC}		longitudinal (station) location of vertical tail reference center, in
X_{WRC}		longitudinal (station) location of wing reference center, in
$Y_{BM_{WI}}$		lateral location of inboard wing-root bending gauge, in
$Y_{BM_{WO}}$		lateral location of outboard wing-root bending gauge, in

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
Y_{CP_W}	YWCP	wing center-of-pressure, lateral location, in
Y_{WRC}		lateral (buttplane) location of wing reference center, in
$Z_{BM_{V_I}}$		vertical location of inboard vertical tail-root bending gauge, in
$Z_{BM_{V_O}}$		vertical location of outboard vertical tail-root bending gauge, in
Z_{CP_V}	ZVCP	vertical tail center-of-pressure, vertical location, in
Z_{VRC}		vertical (waterplane) location of vertical tail reference center, in
α	ALPHA	model angle-of-attack, deg
α_{Nj}		pitch angle of nozzle-j measured in a plane parallel to the Orbiter plane of symmetry, degrees
β	BETA	model angle-of-sideslip, deg
γ_{Nj}		pitch angle of nozzle-j measured in a plane which yaws with the nozzle, degrees
δ_{DF}	BDFLAP	bodyflap deflection, deg
$\delta_{E_{I_I}}$	ELV-LI	left inboard elevon deflection, deg
$\delta_{E_{I_O}}$	ELV-LO	left outboard elevon deflection, deg
$\delta_{E_{r_I}}$	ELV-RI	right inboard elevon deflection, deg
$\delta_{E_{r_O}}$	ELV-RO	right outboard elevon deflection, deg

NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
δE_I	ELV-IB	inboard elevon deflection, deg
δE_O	ELV-OB	outboard elevon deflection, deg
δR	RUDDER	rudder deflection, deg
δSB	SPDBRK	speedbrake deflection, deg
ΔC_{p_i}	DCPi	incremental pressure coefficient, i = tap#
$\Delta C_{p_{av\#}}$	DCP#A	average value of incremental pressure coefficients for model surface taps
ψ_{N_j}		yaw angle of nozzle-j measured in an Orbiter waterplane, deg
ϕ	PHI	radial location, deg
$C_{p_{av\#}}$	CP#AV	average value of pressure coefficients for model surface taps
$\Delta(i)$	D(i)	incremental coefficient (i) due to thrust (i) \equiv previously defined coefficient
$\Delta(i)_{\delta E}$	D(i)E	incremental coefficient (i) due to elevon deflection, (i) \equiv previously defined coefficient
l_B		body length, in
R/R_{Od}	R/ROD	radius of tap location divided by outer radius
x_B/l_B	XB/LB	SRB base longitudinal distance divided by body length

NOMENCLATURE (Concluded)

SUBSCRIPTS

B	base, body
c	chamber
e	exit
E	elevon
G	gauge
i	surface-pressure tap number
I	inboard
J	nozzle number
l	left
N	nozzle, Orbiter nose
O	outboard, Orbiter
r	right
R	rudder
S	Solid Rocket Booster
T	External Tank, total
V	vertical tail
W	wing
∞	static

CONFIGURATIONS INVESTIGATED

The model employed in Test IA80, 88-OTS, was a 0.020-scale representation of the Vehicle 5 Space Shuttle launch configuration with mated Orbiter, External Tank, and Solid Rocket Boosters. Main Propulsion System and Solid Rocket Motor cold-gas plume-simulation was made possible by dual high-pressure air-supply systems.

Various elevon control settings were incorporated in the run schedule, while no gimbal-angle changes were made on the nozzles. Several different nozzle operation pressures were set for each Mach number, and two nozzle contours were tested.

Component dimensions are presented in Table III. Control-setting parameters were as indicated in Table II. Model surface-pressure tap locations are shown in Table IV.

The Orbiter, designated as O, was comprised of components identified as follows:

<u>Component Symbol</u>	<u>Description</u>
B ₆₂	fuselage
C ₁₂	canopy
E ₅₂	elevons
F ₁₀	bodyflap
M ₁₆	OMS/RCS pods
N ₈₇	MPS nozzles, conical
N ₈₉	OMS nozzles

CONFIGURATIONS INVESTIGATED (Continued)

N ₁₀₄	MPS nozzles, contoured
R ₅	rudder/speedbrake
V ₈	vertical tail
W ₁₁₆	wing

The External Tank, designated as T₂₈, was comprised of components identified as follows:

AT ₂₈	attach structure
AT ₃₁	attach structure
AT ₃₂	attach structure
FR ₁₀	aft attach crossbeam
FL ₁₀	feedline
FL ₁₁	feedline
PT ₁₂	ET protuberances
PT ₂₂	ET protuberances
PT ₂₃	ET protuberances
PT ₂₄	ET protuberances
PT ₂₅	ET protuberances
PT ₂₆	ET protuberances
PT ₂₇	ET protuberances

CONFIGURATIONS INVESTIGATED (Concluded)

The solid rocket booster, designated as S₂₂, was composed of components identified as follows:

N ₈₈	SRB nozzles
PS ₁₁	SRB protuberances
PS ₁₂	SRB protuberances
PS ₁₃	SRB protuberances
PS ₁₄	SRB protuberances
PS ₁₇	SRB protuberances
PS ₁₈	SRB protuberances
PS ₁₉	SRB protuberances

The launch configuration was designated as OTS on the Data Set/Run Number Collation Summary sheets.

TEST FACILITY DESCRIPTION

The NASA/Ames Research Center Unitary Plan Wind Tunnel 11 x 11 transonic leg is one of three circuits operating from a common power system and two compressor systems. The 11 x 11 leg is capable of attaining Mach numbers from 0.60 to 1.40, at Reynolds numbers from 1.7×10^6 per foot to 9.4×10^6 per foot.

The tunnel is a closed-return, air-medium, variable-density facility, operating at ambient temperatures and having a bled test section for transonic conditions.

Models are supported by means of conventional stings or sting/strut assemblies for force, moment, pressure, and component-loads testing. The tunnel sector-strut system can attain angles-of-attack to ± 15 degrees and angles-of-sideslip to ± 15 degrees about its body-of-revolution.

Schlieren and shadowgraph photographic systems are available, and high-pressure air-supply systems exist for use in power-plume simulations and thrust tests.

DATA REDUCTION

Standard tunnel operation parameters were computed by the facility along with model plume-simulation pressure data, model surface-pressure values and coefficients, rudder and elevon hinge-moments, and air-supply temperatures. Model angle-of-attack was determined by the onboard dangleometer. Furthermore, wing and vertical-tail bending and torsional moments were recorded and reduced to present centers-of-pressure and forces.

The following equations and methods were used:

Wing Normal-Force Coefficient:

$$C_{N_W} = \frac{BM_{W_I} - BM_{W_O}}{(Y_{BM_{W_O}} - Y_{BM_{W_I}}) S q}$$

Wing-Root Bending-Moment Coefficient:

$$C_{B_W} = \left[\frac{BM_{W_O}}{S q b} \right] + \left[\frac{C_{N_W} (Y_{BM_{W_O}} - Y_{WRC})}{b} \right]$$

or:

$$= \left[\frac{BM_{W_I}}{S q b} \right] + \left[\frac{C_{N_W} (Y_{BM_{W_I}} - Y_{WRC})}{b} \right]$$

Wing-Root Torsional-Moment Coefficient:

$$C_{T_W} = \left[\frac{TM_{W_G}}{S q \bar{c}} \right] - \left[\frac{C_{N_W} (X_{TM_{W_G}} - X_{WRC})}{\bar{c}} \right]$$

DATA REDUCTION (Continued)

Wing-Center-of-Pressure:

$$\begin{aligned}
 x_{CP_W} &= x_{TM_{WG}} - \left[\frac{TM_{WG}}{S C_{N_W} q} \right] \\
 y_{CP_W} &= y_{BM_{WI}} + \left[\frac{BM_{WI}}{S C_{N_W} q} \right] \\
 &\text{or:} \\
 &= y_{BM_{WO}} + \left[\frac{BM_{WO}}{C_{N_W} S q} \right]
 \end{aligned}$$

Vertical Tail Side-Force Coefficient:

$$c_{Y_V} = \frac{BM_{VI} - BM_{VO}}{(Z_{BM_{VO}} - Z_{BM_{VI}}) S_V q}$$

Vertical Tail-Root Bending-Moment Coefficient:

$$\begin{aligned}
 c_{B_V} &= \left[\frac{BM_{VO}}{S_V q b_V} \right] + \left[\frac{c_{Y_V} (Z_{BM_{VO}} - Z_{VRC})}{b_V} \right] \\
 &\text{or:} \\
 &= \left[\frac{BM_{VI}}{S_V q b_V} \right] + \left[\frac{c_{Y_V} (Z_{BM_{VI}} - Z_{VRC})}{b_V} \right]
 \end{aligned}$$

Vertical Tail-Root Torsional-Moment Coefficient:

$$c_{T_V} = \left[\frac{TM_{VG}}{S_V q \bar{c}_V} \right] = \left[\frac{c_{Y_V} (x_{TM_{VG}} - x_{VRC})}{\bar{c}_V} \right]$$

DATA REDUCTION (Continued)

Vertical Tail Center-of-Pressure:

$$\begin{aligned}
 x_{CP_V} &= x_{TM_{VG}} - \left[\frac{TM_{VG}}{C_{Y_V} S_V q} \right] \\
 z_{CP_V} &= z_{BM_{VI}} + \left[\frac{BM_{VI}}{C_{Y_V} S_V q} \right] \\
 &\text{or:} \\
 &= z_{BM_{VO}} + \left[\frac{BM_{VO}}{C_{Y_V} S_V q} \right]
 \end{aligned}$$

Nozzle-Pressure Ratios:

$$CPR_j = \frac{P_{c_j}}{P_\infty}$$

$$EPR_j = \frac{P_{e_j}}{P_\infty}$$

where: j =

- 1, Top MPS nozzle
- 2, L.H. MPS nozzle
- 3, R.H. MPS nozzle
- 4, L.H. SRB nozzle
- 5, R.H. SRB nozzle

Hinge-Moments:

$$C_{H_{EI}} = \frac{HM_{EI}}{S_E q \bar{c}_E}$$

$$C_{H_{EO}} = \frac{HM_{EO}}{S_E q \bar{c}_E}$$

$$C_{H_{ET}} = C_{H_{EI}} + C_{H_{EO}}$$

$$C_{H_R} = \frac{HM_R}{S_R q \bar{c}_R}$$

DATA REDUCTION (Continued)

Surface-Pressure Coefficients:

$$C_{p_i} = \frac{P_i - P_\infty}{q}$$

Coefficient averages:

For $i = 2, 21, 22, 39, 40, 60, 67, 68, 75, 76$

$$C_{p_{av_i}} = (C_{p_i} + C_{p_{i+2}} + C_{p_{i+4}} + C_{p_{i+6}}) / 4$$

For $i = 12, 29, 30, 47, 48:$

$$C_{p_{av_i}} = (C_{p_i} + C_{p_{i+2}} + C_{p_{i+6}} + C_{p_{i+8}}) / 4$$

And:

$$C_{p_{av_{13}}} = (C_{p_{13}} + C_{p_{17}} + C_{p_{19}}) / 3$$

$$C_{p_{av_{59}}} = (C_{p_{59}} + C_{p_{61}} + C_{p_{63}} + C_{p_{67}}) / 4$$

To reflect plume effects on surface pressures, incremental data were computed from results of tests with plume simulation and tests without plume simulation:

$$\Delta C_{p_i} = C_{p_i} \left(\begin{smallmatrix} \text{with} \\ \text{plume} \end{smallmatrix} \right) - C_{p_i} \left(\begin{smallmatrix} \text{without} \\ \text{plume} \end{smallmatrix} \right)$$

$$\Delta C_{p_{av_i}} = C_{p_{av_i}} \left(\begin{smallmatrix} \text{with} \\ \text{plume} \end{smallmatrix} \right) - C_{p_{av_i}} \left(\begin{smallmatrix} \text{without} \\ \text{plume} \end{smallmatrix} \right)$$

DATA REDUCTION (Continued)

<u>Symbol</u>	<u>Full-Scale</u>	<u>Model-Scale</u>
b	936.68 in	18.734 in
b _V	315.72 in	6.3144
\bar{c}	474.8 in	9.496 in
\bar{c}_E	90.70 in	1.814 in
\bar{c}_R	73.20 in	1.464 in
\bar{c}_V	199.81 in	3.996 in
ℓ_B	1290.3 in	25.806 in
S _E	210.00 ft ²	0.08400 ft ²
S _R	100.15 ft ²	0.04006 ft ²
S	2690.0 ft ²	1.0760 ft ²
S _V	413.25 ft ²	0.16530 ft ²
X _N	235.0	4.700 in
X _{TMVG}	—	28.5500 in
X _{TMWG}	—	24.6400 in
X _{VRC}	1414.3 in	28.286 in
X _{WRC}	1307.0 in	26.140 in
Y _{BMWI}	—	2.4962 in
Y _{BMWO}	—	3.9037 in

DATA REDUCTION (Concluded)

<u>Symbol</u>	<u>Full-Scale</u>	<u>Model-Scale</u>
Y _{WRC}	106.0 in	2.120 in
Z _{BMV_I}	—	10.4681 in
Z _{BMV_O}	—	11.3935 in
Z _{YRC}	503.0 in	10.060 in

Resulting data are presented in the data figures and in the appendix.

RESULTS AND DISCUSSION

Generally high data confidence can be ascribed to the results of this test program, as instrumentation anomalies were few and correctable. Most data error was attributable to model failure, and the following outlines those incidents.

Hinge-moment data was consistently good with only minor zero-return changes due to gradual wear of hinge bearings in the elevons.

Post test data-correction factors had to be applied to Main Propulsion System nozzle chamber pressure readings, as the total-pressure probes progressively failed during testing. However, these corrections were small, on the order of 1%, and are already incorporated in data presented herein.

Scanivalve-measured Orbiter, External Tank, and Solid Rocket Booster surface pressures were also extremely reliable, with only one orifice apparently plugged, Tap #30 shown in Table 4.

Due to the loss of the right-hand contoured MPS nozzle during Run 311, all contoured-nozzle configuration testing after Run 313 employed the conical nozzle in the top-center location. The top-center contoured nozzle was used in the right-hand location, consequently.

TABLE I

TEST : IA80		DATE : 8 NOV., 1974	
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	1.75×10^6	1.46	77
0.60	2.56×10^6	2.13	81
0.60	3.39×10^6	2.93	91
0.90	2.17×10^6	2.44	85
0.90	3.13×10^6	3.52	90
0.90	4.26×10^6	4.48	92
1.10	2.25×10^6	2.93	90
1.10	3.27×10^6	4.26	94
1.10	4.30×10^6	5.79	109
1.25	2.27×10^6	3.11	90
1.25	3.29×10^6	4.52	94
1.25	4.36×10^6	6.16	105
1.40	2.23×10^6	3.18	90
1.40	3.22×10^6	4.62	96
1.40	4.25×10^6	6.32	111

BALANCE UTILIZED: None

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	_____	_____	_____
SF	_____	_____	_____
AF	_____	_____	_____
PM	_____	_____	_____
RM	_____	_____	_____
YM	_____	_____	_____

COMMENTS:

TABLE II.

TEST: IASO		DATA SET RUN NUMBER COLLATION SUMMARY										DATE: 8 NOV 74					
DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS/VALUES								NO. OF RUNS	ANGLE-OF-ATTACK				
		α	β	SRB	SSM	SEL	SEC	RN	M						-4	0	4
RE4001	OTS		8	N+	N	0	0	3.4	0.6						240	241	242
02								4.25	0.9						222	223	224
03									1.1						74	75	76
04									1.25						48	49	50
05									1.4						1	2	3
06				N+	N			3.4	0.6						243	244	245
07								4.25	0.9						225	226	227
08									1.1						77	78	79
09									1.25						51	52	53
10									1.4						4	5	6
11				N	N+			3.4	0.6						249	250	251
12								4.25	0.9						231	232	233
13									1.1						80	81	82
14									1.25						54	55	56
15									1.4						7	8	9
16				N	N-				0.9						234	235	236
17									1.1						93	94	95
18									1.25						57	58	59

TEST RUN NUMBERS

36

1
7
13
19
25
31
37
43
49
55
61
67
75
76

SEE ATTACHED SHEET FOR COMPLETE COEFFICIENT SCHEDULES

COEFFICIENTS
 α OR β _____
 SCHEDULES _____

IDVAR (1) _____
 IDVAR (2) _____
 NDV _____

TABLE II. - Continued.

TEST : IA80		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :								
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES								NO. OF RUNS	ANGLE-OF-ATTACK							
		α	β	SRB	SSME	SEI	SEO	RN	M											
RE4019	OTS		B	N	N-	O	O	4.25	1.4						-4	0	4			
20				N	N			3.4	0.6						10	11	12			
21								4.25	0.9						246	247	248			
22									1.1						228	229	230			
23									1.25						86	87	88			
24				↓	↓				1.4						60	61	62			
25				N-	N				1.1						13	14	15			
26									1.25						89	90	91			
27				↓	↓			↓	1.4						63	64	65			
28				OFF	OFF			3.4	0.6						16	17	18			
29								4.25	0.9						237	238	239			
30									1.1						219	220	221			
31									1.25						69	70	71			
32								↓	1.4						66	67	68			
33								1.75	0.6						19	20	21			
34								2.25	0.9						270	271	272			
35									1.1						267	268	269			
↓ 36	↓		↓	↓	↓	↓	↓	↓	1.25						22	23	24			
															30	31	32			
		1	7	13	19	25	31	37	43	49	55	61	67	75	76					
COEFFICIENTS																		IDVAR (1)	IDVAR (2)	IDV
α OR β																				
SCHEDULES																				

TEST RUN NUMBERS

37

TABLE II. - Continued.

TEST: IA80		DATA SET/RUN NUMBER COLLATION SUMMARY												DATE:											
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	ANGLE-OF-ATTACK			TEST RUN NUMBERS							
		α	β	SRB	SSME	SEI	SEO	RN	M							MAIN NO.	-4		0	4					
RE4037	PTS		3	OFF	OFF	0	0	2.25	1.4								33	34	35						
38	39			N	N			1.75	0.6								273	274	275						
	39							2.25	0.9								264	265	266						
	40			↓	↓			2.25	1.1								27	28	29						
	41			OFF	OFF			2.5	0.6								252	253	254						
	42							3.25	0.9								258	259	260						
	43							1.1									36	37	38						
	44							1.25									42	43	44						
	45			↓	↓			↓	1.4								45	46	47						
	46			N	N			2.5	0.6								255	256	257						
	47							3.25	0.9								261	262	263						
	48			↓	↓	↓	↓	3.25	1.1								39	40	41						
	49			0	OFF	OFF	8	4	4.25	V					92										
	50			0	N	N				V					93										
	51			B	OFF	OFF				0.98						112	113	114							
	52				N	N			↓	0.98						115	116	117							
	53			OFF	OFF			3.4	0.6							288	289	290							
	↓ 54		↓	↓	↓	↓	↓	↓	4.25	0.9						296	297	298							
1		7		13		19		25		31		37		43		49		55		61		67		75 76	
COEFFICIENTS																									
IDVAR (1) IDVAR (2) NOV																									
α OR β _____ SCHEDULES _____																									

TABLE II. - Continued.

TEST: IA 80		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:					
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES								NO. OF RUNS	ANGLE-OF-ATTACK				
		α	β	SRB	SSME	SEI	SEO	RN	M						-4	0	4
RE4055	PTS		B	OFF	OFF	8	4	4.25	1.1						106	107	108
56									1.25						94	95	96
57				↓	↓			↓	1.4						100	101	102
58				N	N			3.4	0.6						291	292	293
59								4.25	0.9						299	300	301
60									1.1						109	110	111
61									1.25						97	98	99
62				↓	↓				1.4						103	104	105
63				N	N	↓	↓	↓	0.98						118	119	120
64				OFF	OFF	8	-4	3.4	0.6						314	315	316
65								4.25	0.9						302	303	304
66									1.1						133	134	135
67									1.25						127	128	129
68				↓	↓			↓	1.4						121	122	123
69				N	N			3.4	0.6						317	318	319
70								4.25	0.9						305	306	307
71									1.1						136	137	138
↓ 72	↓		↓	↓	↓	↓	↓	↓	1.25						130	131	132

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS
IDVAR (1) IDVAR (2) NDV

α OR β
SCHEDULES

TABLE II. - Continued.

TEST: IA80		DATA SET RUN NUMBER COLLATION SUMMARY														DATE:			
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	ANGLE-OF-ATTACK			TEST RUN NUMBERS	
		α	β	SRB	SSME	SEI	SEO	RN	M								-4		0
RE4073	QTS		B	N	N	8	-4	4.25	1.4								124	125	126
74				OFF	OFF	8	0	3.4	0.6								276	277	278
75								4.25	0.9								282	283	284
76									1.1								153	154	155
77									1.25								147	148	149
78				↓	↓			↓	1.4								141	142	143
79				N	N			3.4	0.6								279	280	281
80								4.25	0.9								285	286	287
81									1.1								156	157	158
82									1.25								150	151	152
83				↓	↓	↓	↓	↓	1.4								144	145	146
84				OFF	OFF	8	2	3.4	0.6								326	327	328
85								4.25	0.9								320	321	322
86				↓	↓			↓	1.1								159	160	161
87				N	N			3.4	0.6								329	330	331
88								4.25	0.9								323	324	325
89				↓	↓	↓	↓	4.25	1.1								162	163	164
↓ 90	↓		↓	OFF	OFF	4	4	3.4	0.6								332	333	334

1	7	13	19	25	31	37	43	49	55	61	67	75	76
COEFFICIENTS													
IDVAR (1) IDVAR (2) NCV													
α OR β SCHEDULES													

TABLE II. - Continued.

TEST : <i>IA 80</i>		DATA SET/RUN NUMBER COLLATION SUMMARY												DATE :			
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	ANGLE-OF-ATTACK		
		α	β	SRB	SME	SEI	SEO	RN	PT							-4	0
<i>RE4091</i>	<i>ΦTS</i>		<i>B</i>	<i>OFF</i>	<i>OFF</i>	<i>4</i>	<i>4</i>	<i>4.25</i>	<i>0.9</i>						<i>338</i>	<i>339</i>	<i>340</i>
<i>92</i>									<i>1.1</i>						<i>177</i>	<i>178</i>	<i>179</i>
<i>93</i>									<i>1.25</i>						<i>171</i>	<i>172</i>	<i>173</i>
<i>94</i>				↓	↓			↓	<i>1.4</i>						<i>165</i>	<i>166</i>	<i>167</i>
<i>95</i>				<i>N</i>	<i>N</i>			<i>3.4</i>	<i>0.6</i>						<i>335</i>	<i>336</i>	<i>337</i>
<i>96</i>								<i>4.25</i>	<i>0.9</i>						<i>341</i>	<i>342</i>	<i>343</i>
<i>97</i>									<i>1.1</i>						<i>180</i>	<i>181</i>	<i>182</i>
<i>98</i>									<i>1.25</i>						<i>174</i>	<i>175</i>	<i>176</i>
<i>99</i>				↓	↓	↓	↓	↓	<i>1.4</i>						<i>168</i>	<i>169</i>	<i>170</i>
<i>A0</i>				<i>OFF</i>	<i>OFF</i>	<i>0</i>	<i>4</i>	<i>3.4</i>	<i>0.6</i>						<i>344</i>	<i>345</i>	<i>346</i>
<i>A1</i>								<i>4.25</i>	<i>0.9</i>						<i>350</i>	<i>351</i>	<i>352</i>
<i>A2</i>									<i>1.1</i>						<i>195</i>	<i>196</i>	<i>197</i>
<i>A3</i>									<i>1.25</i>						<i>189</i>	<i>190</i>	<i>191</i>
<i>A4</i>				↓	↓			↓	<i>1.4</i>						<i>183</i>	<i>184</i>	<i>185</i>
<i>A5</i>				<i>N</i>	<i>N</i>			<i>3.4</i>	<i>0.6</i>						<i>347</i>	<i>348</i>	<i>349</i>
<i>A6</i>								<i>4.25</i>	<i>0.9</i>						<i>353</i>	<i>354</i>	<i>355</i>
<i>A7</i>									<i>1.1</i>						<i>198</i>	<i>199</i>	<i>200</i>
↓ <i>A8</i>	↓	↓	↓	↓	↓	↓	↓	↓	<i>1.25</i>						<i>192</i>	<i>193</i>	<i>194</i>
		1	7	13	19	25	31	37	43	49	55	61	67	75	76		
		COEFFICIENTS												IDVAR (1) IDVAR (2) NDV			
α OR β																	
SCHEDULES																	

TEST RUN NUMBERS

1

41

4

42

TABLE II. - Concluded.

DATASETS	IDVAR(1)	IDVAR(2)	COEFFICIENTS
RE4OXX EE4XXX	ALPHA ALPHA	BETA BETA	CBMW, CTMW, CNW, CHEI, CHEO, CBMV, CTMV, CYV, CHR, MACH XWCP, YWCP, XVCP, ZVCP
AE4XXX	ALPHA	BETA	CP379, CP717, CP380, CP718, CP381, CP716, CP720, CP719, CP374, CP376
BE4XXX	ALPHA	BETA	CP2, CP4, CP6, CP8, CP12, CP14, CP18, CP20
CE4XXX	ALPHA	BETA	CP29, CP31, CP35, CP37, CP30, CP32, CP36, CP38
DE4XXX	ALPHA	BETA	CP76, CP78, CP80, CP82, CP75, CP77, CP79, CP81
FE4XXX	ALPHA	BETA	CP378, CP715, CP375, CP377, CP721, CP372, CP714, CP722, CP373, CP713
GE4XXX	ALPHA	BETA	CP723, CP371, CP370, CP724
HE4XXX	ALPHA	BETA	CP22, CP24, CP26, CP28, CP21, CP23, CP25, CP27
IE4XXX	ALPHA	BETA	CP13, CP17, CP19
JE4XXX	ALPHA	BETA	CP39, CP41, CP43, CP45, CP40, CP42, CP44, CP46
KE4XXX	ALPHA	BETA	CP47, CP49, CP53, CP55, CP48, CP50, CP54, CP56
LE4XXX	ALPHA	BETA	CP60, CP62, CP64, CP66, CP59, CP61, CP63, CP65
ME4XXX	ALPHA	BETA	CP68, CP70, CP72, CP74, CP67, CP69, CP71, CP73
RE4CXX	ALPHA	BETA	CP for pressure tap* 9, 10, 15, 16, 33, 34, 51, 54, 57, 58
RE4DXX	ALPHA	BETA	CP for pressure taps* 700, 702, 704, 706, 382, 384, 708, 710, 383, 385
RE4EXX	ALPHA	BETA	CP for pressure taps* 701, 703, 705, 707, 386, 388, 709, 711, 387, 389
RE4GXX	ALPHA	BETA	CP for pressure taps* 518, 805, 800, 521, 806, 801, 804, 807, 802, 515, 808, 803
RE4HXX	ALPHA	BETA	CP for pressure taps* 541, 810, 814, 821, 826, 815, 811, 816, 822, 827, 817, 823, 828, 832, 812, 818, 824, 829, 830, 833, 809, 813, 819, 820, 825, 831, 834
RE4IXX	ALPHA	BETA	CP for pressure taps* 841, 842, 843, 844

* See TABLE IV for tap locations.

Table III Model Dimensional Data

MODEL COMPONENT: ATTACH STRUCTURE - AT 28

GENERAL DESCRIPTION: Rear orbiter to ET attach structure (LH and RH) (2 members)

MODEL SCALE: 0.020

MODEL DRAWING NO.: _____

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:

<u>MEMBER</u>		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
#1	X _O	<u>1317.00</u>	<u>26.34</u>
	Y _O	<u>- 96.50 (LH) -</u>	<u>1.930</u>
		<u>96.50 (RH)</u>	<u>1.930</u>
	Z _O	<u>267.50</u>	<u>5.350</u>
	X _T	<u>2058.00</u>	<u>41.16</u>
	Y _T	<u>-125.68 (LH) -</u>	<u>2.514</u>
		<u>125.68 (RH)</u>	<u>2.514</u>
	Z _T	<u>515.5</u>	<u>10.310</u>
#2	X _O	<u>1317.00</u>	<u>26.34</u>
	Y _O	<u>- 96.50 (LH) -</u>	<u>1.930</u>
		<u>96.50 (RH)</u>	<u>1.930</u>
	Z _O	<u>267.50</u>	<u>5.350</u>
	X _T	<u>1872.00</u>	<u>37.44</u>
	Y _T	<u>-125.68 (LH) -</u>	<u>2.514</u>
		<u>125.68 (RH)</u>	<u>2.514</u>
	Z _T	<u>504.5</u>	<u>10.090</u>
Diameter, In.	#1	<u>11.5</u>	<u>0.230</u>
	#2	<u>15.5</u>	<u>0.310</u>

Table III (Cont'd)

MODEL COMPONENT: ATTACH STRUCTURE - AT₃₁

GENERAL DESCRIPTION: REAR ET to SRB attach structure (LH and RH). (3 members)

MODEL SCALE: 0.020

MODEL DRAWING: _____

DRAWING NO.: VL78-000063, -000062B, -000066

DIMENSIONS:	MEMBER	FULL SCALE	MODEL SCALE
X _T	#1	2058.00	41.16
Y _T		-171.50	- 3.430 (LH)
		171.50	3.430 (RH)
Z _T		457.00	9.140
X _S		1511.00	41.16
Y _S		53.24	1.064
Z _S		57.00	1.14
X _T	#2	2058.00	41.16
Y _T		-163.85	- 3.277
Z _T		449.81	8.996
X _S		1511.00	30.22
Y _S		76.56	1.531
Z _S		15.73	0.315
X _T	#3	2058	41.16
Y _T		-161.72	-3.234
Z _T		343.00	6.860
X _S		1511.00	30.22
Y _S		53.24	1.597
Z _S		- 57.00	-1.140
Diameter of members, In.:	#1	_____	_____
	#2	_____	_____
	#3	_____	_____

Table III (Cont'd)

MODEL COMPONENT: ATTACH STRUCTURE - AT 32

GENERAL DESCRIPTION: Forward orbiter/ET attach structure (2 members)

MODEL SCALE: 0.020

DRAWING NO.: VL78-000062B, Martin Marietta 8260020914

DIMENSIONS:		<u>MEMBER</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Member	#1			
		X_O	<u>388.15</u>	<u>7.763</u>
		Y_O	<u>0</u>	<u>0</u>
(Attach point on Orbiter Z_T 614)		Z_O	<u>LWR ML</u>	<u>LWR ML</u>
		X_T	<u>1129.9</u>	<u>22.598</u>
		Y_T	<u>46.50</u>	<u>9.300</u>
(Attach point on Tank)		Z_T	<u>562.58</u>	<u>11.251</u>
	#2			
		X_O	<u>388.15</u>	<u>7.763</u>
		Y_O	<u>0</u>	<u>0</u>
		Z_O	<u>LWR ML</u>	<u>LWR ML</u>
		X_T	<u>1129.9</u>	<u>22.598</u>
		Y_T	<u>-46.50</u>	<u>-0.930</u>
		Z_T	<u>562.58</u>	<u>11.252</u>
Diameter, In.	#1		<u>6.00</u>	<u>0.120</u>
	#2		<u>6.00</u>	<u>0.120</u>

Table III (Cont'd)

MODEL COMPONENT : BODY B₆₂

GENERAL DESCRIPTION : Configuration 140C orbiter fuselage, MCR 200-R4.

Similar to 140A/B fuselage except aft body revised and improved midbody-wing-boot fairing, $X_o = 940$ to $X_o = 1040$.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-000140C, -000202C, -000205A
-000200B, -000203

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (IML: Fwd Sta $X_o = 238$), In.	1290.3	25.806
Length (OML: Fwd Sta $X_o = 235$), In.	1293.3	25.866
Max Width (At $X_o = 1528.3$), In.	264.0	5.280
Max Depth (At $X_o = 1464$), In.	250.0	5.00
Fineness Ratio	4.899	4.899
Area - Ft^2		
Max. Cross-Sectional	340,885	0.136
Planform		
Wetted		
Base		

Table III (Cont'd)

MODEL COMPONENT : CANOPY - C₁₂

GENERAL DESCRIPTION : Configuration 140C orbiter canopy. Vehicle Cabin No. 31 updated to MCR 200-R4. Used with Fuselage B₆₂.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-000140C, -000202B, -000204

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length($X_o = 434.643$ to 578), In.	<u>143.357</u>	<u>2.867</u>
Max Width (At $X_o = 513.127$), In.	<u>152.412</u>	<u>3.048</u>
Max Depth (At $Z_o = 501$ to 449.39), In.	<u>51.61</u>	<u>1.032</u>
Fineness Ratio	<u> </u>	<u> </u>
Area	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III (Cont'd)

MODEL COMPONENT: ELEVON - E₅₂

GENERAL DESCRIPTION: Elevon for configuration 140C. Hingeline at $X_o = 1387$,
elevon split line $X_{sp} = 312.5$. 6.0" gaps, beveled edges, and centerbodies.

MODEL SCALE: 0.020

DRAWING NUMBER: VL70-000140C, -006089, -006092, SS-A01260

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft ²	<u>210.0</u>	<u>0.084</u>
Span (equivalent) , In.	<u>349.2</u>	<u>6.984</u>
Inb'd equivalent chord , In.	<u>118.0</u>	<u>2.360</u>
Outb'd equivalent chord , In.	<u>55.19</u>	<u>1.104</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2096</u>	<u>0.2096</u>
At Outb'd equiv. chord	<u>0.4004</u>	<u>0.4004</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.0</u>	<u>0.0</u>
Tailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline (Product of area & \bar{c})	<u>0.0</u>	<u>0.0</u>
Area Moment , Ft ³	<u>1587.25</u>	<u>0.0127</u>
Mean Aerodynamic Chord, In.	<u>90.7</u>	<u>1.814</u>
Hingeline dihedral (origin at $Z_o = 261.3509$), deg.)	<u>5.229</u>	<u>5.229</u>

Table III (Cont'd)

MODEL COMPONENT : BODY FLAP - F₁₀

GENERAL DESCRIPTION : Configuration 140C body flap. Hingeline located
at X₀ = 1532, Z₀ = 287.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-000140C, -355114

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length(X ₀ = 1525.5 to 1613), In.	<u>87.50</u>	<u>1.750</u>
Max Width (At L.E., X ₀ = 1525.5) In.	<u>256.00</u>	<u>5.12</u>
Max Depth (X ₀ = 1532.0), In.	<u>19.798</u>	<u>0.594</u>
Fineness Ratio	<u> </u>	<u> </u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional (At H.L.)	<u>35.196</u>	<u>0.0317</u>
Planform	<u>135.00</u>	<u>0.1215</u>
Wetted	<u> </u>	<u> </u>
Base (X ₀ = 1613)	<u>4.89</u>	<u>0.0044</u>

Table III (Cont'd)

MODEL COMPONENT: FEEDLINE - FL₁₀

GENERAL DESCRIPTION: LH₂ feedline on upper left-hand side of T₂₈.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B

DIMENSIONS:		<u>FULL SCALE</u>	<u>NNMODEL SCALE</u>
Leading edge at:	X _T	2071.5	41.430
	Y _T	- 70.00	-1.400
	Z _T	573.934	11.479
Trailing edge at:	X _T	2081.8	41.636
	Y _T	- 70.00	-1.400
	Z _T	584.059	11.681
Diameter of line (17.0 I.D.)		18.160	0.363

Table III (Cont'd)

MODEL COMPONENT: FEEDLINE - FL₁₁

GENERAL DESCRIPTION: LO₂ feedline on upper right-hand of T₂₈

MODEL SCALE: 0.020

DRAWING NUMBER: VL78-000063, -000062B

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	1000.667	20.013
	Y _T	70.00	1.400
	Z _T	150.519	3.010
Trailing edge at:	X _T	2071.5	41.430
	Y _T	70.00	1.400
	Z _T	573.934	11.479
Diameter of line (17.0 I.D.)		18.16 O.D.	0.363

Table III (Cont'd)

MODEL COMPONENT: FAIRING - FR₁₀

GENERAL DESCRIPTION: Umbilical door fairing between aft ET/Orbiter
attach structure.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	2052.0	41.04
Length		193.0	3.86
Width		15.00	0.300

Table III (Cont'd)

MODEL COMPONENT : OMS POD - M₁₆

GENERAL DESCRIPTION : Configuration 140C orbiter OMS pod - short
pod.

MODEL SCALE: 0.020

DRAWING NUMBER : VL70-008401, -008410

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta $X_0 = 1310.5$), In.	<u>258.50</u>	<u>5.170</u>
Max Width (At $X_0 = 1511$), In.	<u>136.8</u>	<u>2.736</u>
Max Depth (At $X = 1511$), In.	<u>74.70</u>	<u>1.474</u>
Fineness Ratio	<u>2.484</u>	<u>2.484</u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u>58.864</u>	<u>0.024</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III (Cont'd)

MODEL COMPONENT: MPS NOZZLES - Ng7GENERAL DESCRIPTION: Flow-through MPS nozzles.MODEL SCALE: 0.020DRAWING NUMBER: SS-A01279

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO. 1.55, 2.0, 2.2, 2.6, 3.0, 3.5		
Length - In.		
Gimbal Point to Exit Plane	<u>157.0</u>	<u>3.140</u>
Throat to Exit Plane	<u>181.55</u>	<u>3.361</u>
Diameter - In.		
Exit	<u>90.435</u>	<u>1.809</u>
Throat	<u>23.350</u>	<u>0.467</u>
Inlet		
Area - ft ²		
Exit	<u>44.607</u>	<u>0.178</u>
Throat	<u>2.974</u>	<u>0.00198</u>
Gimbal Point (Station) - In.		
Upper Nozzle		
X _o	<u>1445.00</u>	<u>28.90</u>
Y _o	<u>0.0</u>	<u>0.0</u>
Z _o	<u>443.00</u>	<u>8.86</u>
Lower Nozzles		
X _o	<u>1468.17</u>	<u>29.363</u>
Y _o	<u>±53.0</u>	<u>±1.06</u>
Z _o	<u>342.64</u>	<u>6.853</u>
Null Position - Deg.		
Upper Nozzle		
Pitch	<u>16</u>	<u>16</u>
Yaw	<u>0</u>	<u>0</u>
Lower Nozzle		
Pitch	<u>10</u>	<u>10</u>
Yaw	<u>0</u>	<u>0</u>

Table III (Cont'd)

MODEL COMPONENT: SRB NOZZLE - N₈₈

GENERAL DESCRIPTION: Flow-through SRB nozzle simulator = 7.0 prototype.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01281

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MAC	1.55, 2.0, 2.2, 2.6, 3.0, 3.5	
Length		
Gimbal Point to Exit Plane	<u>86.8</u>	<u>1.736</u>
Throat to Exit Plane	<u>112.135</u>	<u>2.243</u>
Diameter - In.		
Exit	<u>114.290</u>	<u>2.886</u>
Throat	<u>64.53</u>	<u>1.291</u>
Inlet		
Area - ft ²		
Exit	<u>356.738</u>	<u>0.143</u>
Throat	<u>22.712</u>	<u>0.009</u>
Gimbal Point (Station) - In.		
XB	<u>1902.6</u>	<u>38,052</u>
YB	<u>250.2</u>	<u>5.010</u>
Z		
Lower Nozzles		
X		
Y		
Z		
Null Position - Deg.		
Pitch	<u>0</u>	<u>0</u>
Yaw	<u>0</u>	<u>0</u>
Lower Nozzle		
Pitch		
Yaw		

Table III (Cont'd)

MODEL COMPONENT: OMS NOZZLES - N₈₉

GENERAL DESCRIPTION: OMS nozzle in stowed position which is outboard 8 deg. and down 7 deg. from null position. Use with M₁₆.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01279

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	<u>56.0</u>	<u>1.12</u>
Throat to Exit Plane	<u> </u>	<u> </u>
Diameter - In.		
Exit (.O.D.)	<u>50.0</u>	<u>1.00</u>
Throat	<u> </u>	<u> </u>
Inlet	<u> </u>	<u> </u>
Area - ft ²		
Exit	<u> </u>	<u> </u>
Throat	<u> </u>	<u> </u>
Gimbal Point (Station) - In.		
X ₀	<u>1518.00</u>	<u>30.360</u>
Y ₀	<u>88.00</u>	<u>1.76</u>
Z ₀	<u>492.0</u>	<u>9.84</u>
Lower Nozzles		
X	<u> </u>	<u> </u>
Y	<u> </u>	<u> </u>
Z	<u> </u>	<u> </u>
Null Position - Deg.		
Pitch	<u>15°49'</u>	<u>15°49'</u>
Yaw	<u>6°30'</u>	<u>6°30'</u>
Lower Nozzle		
Pitch	<u> </u>	<u> </u>
Yaw	<u> </u>	<u> </u>

Table III (Cont'd)

MODEL COMPONENT: NOZZLES - N₁₀₄

GENERAL DESCRIPTION: Flow-through MPS nozzles with gimbal capability.

Same as N₈₇, except that these nozzles have contoured interior, the exterior same as N₈₇ when shroud is attached.

MODEL SCALE: 0.020

DRAWING NUMBER: SS-A01261

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	<u>157.00</u>	<u>3.14</u>
Throat to Exit Plane	<u>119.69</u>	<u>2.394</u>
Diameter - In.		
Exit	<u>90.435</u>	<u>1.809</u>
Throat	<u>30.140</u>	<u>0.603</u>
Inlet		
Area - ft ²		
Exit	<u>44.607</u>	<u>0.0178</u>
Throat	<u>4.955</u>	<u>0.00198</u>
Gimbal Point (Station) - In.		
Upper Nozzle		
X _o	<u>1445.00</u>	<u>28.90</u>
Y _o	<u>0.0</u>	<u>0.0</u>
Z _o		
Lower Nozzles		
X _o	<u>1468.17</u>	<u>29.3634</u>
Y _o	<u>53.0</u>	<u>1.06</u>
Z _o	<u>342.64</u>	<u>6.853</u>
Null Position - Deg.		
Upper Nozzle		
Pitch	<u>16</u>	<u>16</u>
Yaw	<u>0</u>	<u>0</u>
Lower Nozzle		
Pitch	<u>10</u>	<u>10</u>
Yaw	<u>OUTB'D 3°30'</u>	<u>OUTB'D 3°30'</u>

Table III (Cont'd)

MODEL COMPONENT : ELECTRICAL TUNNEL - PS₁₁

GENERAL DESCRIPTION : Tunnel running longitudinally on the SRB for electrical wires.

MODEL SCALE: 0.020

DRAWING NUMBER: VC77-000002

DIMENSIONS :	FULL SCALE	MODEL SCALE
Width, In.	<u>5.70</u>	<u>0.114</u>
Radius, In.	<u>5.70</u>	<u>0.114</u>
Height, In	<u>4.70</u>	<u>0.094</u>
L.E. at Sta.	<u>494.70</u>	<u>9.894</u>
L.E. sweepback angle, Deg.	<u>30.0</u>	<u>30.0</u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL TUNNEL - PS₁₂

GENERAL DESCRIPTION: Four ring stiffeners located at the aft end of the solid rocket boosters. The stiffener is a curved I-beam.

MODEL SCALE: 0.020

DRAWING NO.: VC77-000002

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Height, In.		2.5	0.050
Length, In.		2.0	0.04
Locations:	$X_B =$	1602.00	32.04
		1644.00	32.88
		1729.00	34.58
		1771.00	35.42

Table III (Cont'd)

MODEL COMPONENT: CIRCUMFERENTIAL STIFFENER - PS₁₃

GENERAL DESCRIPTION: Ring stiffener located at the point where the skirt flares. The stiffener is I-beam.

MODEL SCALE: 0.020

DRAWING NO.: VC77-000002

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Height, In.		6.50	0.130
Length, In.		4.00	0.080
Location centerline	X _B	1833.70	36.674

Table III (Cont'd)

MODEL COMPONENT: SOLID ROCKET BOOSTER - EXTERNAL TANK
ATTACH - PS₁₄

GENERAL DESCRIPTION: Two-ring stiffeners located at aft end of
solid rocket boosters. The stiffener is curved I-beam.

MODEL SCALE: 0.020

DRAWING NO.: VC77-000002

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Height, In.		8.00	0.160
Length, In.		3.00	0.060
Location centerline	X _B	1511.00	30.22

Table III (Cont'd)

MODEL COMPONENT: SRB PROTUBERANCES - PS₁₇

GENERAL DESCRIPTION: Electrical connecting box mounted on top of PS₁₄.

MODEL SCALE: 0.020

DRAWING NO.: None

DIMENSIONS:

Width, In.

FULL SCALE

MODEL SCALE

60.00

1.200

Depth, In.

17.5

0.350

Centerline of box located 15 deg inboard from
vertical plane of symmetry.

Table III (Cont'd)

MODEL COMPONENT: SRB PROTUBERANCE - PS₁₈

GENERAL DESCRIPTION: Tie-down fixtures mounted on the aft skirt. Total of four founted 30 deg. on both sides of vertical plane of symmetry.

MODEL SCALE: 0.020

DRAWING NO.: None

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Sta. of leading edge (X_B)	1861.2	37.224
Sta. of Trailing Edge (X_B)	1925.2	38.504
Max. width, In.	14.2	0.284
Height, In.	8.3	0.166

Table III (Cont'd)

MODEL COMPONENT: SRE PROTUBERANCES - PS₁₉

GENERAL DESCRIPTION: Aft separation motor pod mounted on aft skirt
at 20 deg. inboard from top vertical plane of symmetry.

MODEL SCALE: 0.020

DRAWING NO.: None

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Width, In.	14.0	0.280
Height, In. (at Trailing edge)	19.0	0.380
Sweepback of leading edge, deg.	15.0	15.0

Table III (Cont'd)

MODEL COMPONENT: ET PROTUBERANCE - PT₁₂

GENERAL DESCRIPTION: Lightning rod attached to ET nose.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000068A

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length	30.90	0.618
Diameter, In.	3.20	0.096

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL LINE - PT₂₂

GENERAL DESCRIPTION: Left-hand electrical conduit line on T₂₈.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, VL78-000062B

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	1084.333	21.687
	Y _T	- 99.591	- 1.992
	Z _T	-139.620	- 2.794
Trailing edge at:	X _T	2058.00	41.16
	Y _T	- 99.491	-1.992
	Z _T	-139.620	-2.794
Conduit size:		2.0 x 6.0	0.04 x 0.12
Centerline of line located radially at $\phi = 35.5$ deg.			

Table III (Cont'd)

MODEL COMPONENT: LO₂ RECIRCULATION LINE - PT₂₃

GENERAL DESCRIPTION: LO₂ recirculation line on right-hand upper side
of T₂₈.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B , Martin Marietta 82600207000

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	1040.667	20.813
	Y _T	94.169	1.883
	Z _T	540.934	11 11.817
Trailing edge at:	X _T	2062.920	41.258
	Y _T	70.00	1.40
	Z _T	573.934	11.479
Diameter of line		4.00	0.080
Centerline of lines located radially at $\phi = 33^{\circ} 45'$			
(Right of TDC looking forward).			

Table III (Cont'd)

MODEL COMPONENT: LH₂ RECIRCULATION LINE - PT₂₄

GENERAL DESCRIPTION: LH₂ recirculation line on T₂₈.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	1040.667	20.813
	Y _T	- 94.169	-1.883
	Z _T	540.934	11.819
Trailing edge at:	X _T	2062.920	41.258
	Y _T	- 70.00	-1.400
	Z _T	573.934	11.479
Diameter of line		4.0	0.080
Centerline of line located radially at $\phi = 33^{\circ}45'$			
(Left of TDL looking forward).			

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL LINE - PT₂₅

GENERAL DESCRIPTION: Right-hand aft electrical conduit line on T₂₈
with LH₂ pressure sensor line and LOX vent valve actuator line.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	1084.333	21.687
	Y _T	99.591	1.992
	Z _T	139.620	2.792
Trailing edge at:	X _T	2058.000	41.16
	Y _T	99.591	1.992
	Z _T	139.620	2.792
Conduit size		2.0 x 6.0	0.04 x 0.12
Centerline of line located radially at $\phi = 35.5$ deg.			

Table III (Cont'd)

MODEL COMPONENT: LOX PRESSURE LINE - PT₂₆

GENERAL DESCRIPTION: LOX pressure line on the T₂₈.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000063, -000062B, Martin Marietta 82600207000

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	360.733	7.215
	Y _T	15.145	0.303
	Z _T	407.718	8.154
Trailing edge at:	X _T	2083.5	41.670
	Y _T	63.25	1.265
	Z _T	609.00	12.180
Line diameter		2.0	0.040
Centerline of line located radially at $\phi = 27$ deg.			

Table III (Cont'd)

MODEL COMPONENT: ELECTRICAL LINE - PT₂₇

GENERAL DESCRIPTION: Electrical conduit on the right-hand forward section of T₂₈.

MODEL SCALE: 0.020

DRAWING NO.: VL78-000062B

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Leading edge at:	X _T	360.733	7.215
	Y _T	11.549	0.231
	Z _T	412.474	8.250
Trailing edge at:	X _T	876.273	17.525
	Y _T	226.114	4.522
	Z _T	646.774	12.935

Centerline of conduit located radially at $\phi = 47.5$ deg.

Table III (Cont'd)

MODEL COMPONENT: RUDDER - R₅

GENERAL DESCRIPTION: Configuration 140C orbiter rudder (identical to configuration A/B rudder)

MODEL SCALE: 0.020

DRAWING NUMBER: VL70-000146B, -000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft ²	<u>100.15</u>	<u>0.004</u>
Span (equivalent) - In.	<u>201.00</u>	<u>4.020</u>
Inb'd equivalent chord - In.	<u>91.585</u>	<u>1.832</u>
Outb'd equivalent chord - In.	<u>50.833</u>	<u>1.017</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u> </u>	<u> </u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline (Product of area & \bar{c})	<u>34.83</u>	<u>34.83</u>
Area Moment , Ft ³	<u>610.92</u>	<u>0.0049</u>
Mean Aerodynamic Chord, In.	<u>73.2</u>	<u>1.464</u>

Table III (Cont'd)

MODEL COMPONENT : BOOSTER SOLID ROCKET MOTOR - S₂₂

GENERAL DESCRIPTION : The BSRM is an external propulsion system which is jettisoned and recoverable after burnout. The BSRM's can be refurbished and reused after recovery.

MODEL SCALE: 0.020

DRAWING NUMBER : VC77-000002C, VC70-000002A, VC72-000002C

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	<u>1789.60</u>	<u>35.792</u>
Max Width(Tank Dia.) , In.	<u>146.00</u>	<u>2.92</u>
Max Depth (Aft Shroud Dia.), In.	<u>208.20</u>	<u>4.164</u>
Finessess Ratio	<u>8.596</u>	<u>8.596</u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u>236.423</u>	<u>0.095</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>
WP of BSRM Centerline (X _T)	400.00	8.00
FS of BSRM nose (X _T)	743.0	14.86
BP of BSRM centerline (X _T)	250.5	5.010

Table III (Cont'd)

MODEL COMPONENT : EXTERNAL TANK - T₂₈

GENERAL DESCRIPTION : _____

NOTE: Dimensions are to tank structural OML, TPS not included).

MODEL SCALE: 0.020

DRAWING NUMBER: VL72-000143D, VL78-000063

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	<u>1844.275</u>	<u>36.886</u>
Max Width Dia. - In.	<u>331.00</u>	<u>6.62</u>
Max Depth	<u> </u>	<u> </u>
Fineness Ratio	<u>5.687</u>	<u>5.687</u>
Area - Ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u>594.678</u>	<u>0.239</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III (Cont'd)

MODEL COMPONENT: VERTICAL - V₈GENERAL DESCRIPTION: Configuration 140C orbiter vertical tail(identical to configuration 140A/B vertical tail).MODEL SCALE: 0.020DRAWING NUMBER: VL70-000140C, -000146B

DIMENSIONS:

FULL SCALEMODEL SCALE

TOTAL DATA

Area (Theo) - Ft²

Planform

413.2530.165

Span (Theo) - In.

315.726.314

Aspect Ratio

1.6751.675

Rate of Taper

0.5070.507

Taper Ratio

0.4040.404

Sweep-Back Angles, Degrees.

Leading Edge

45.0045.00

Trailing Edge

26.2526.25

0.25 Element Line

41.1341.13

Chords:

Root (Theo) WP

268.505.370

Tip (Theo) WP

108.472.169

MAC

199.813.996

Fus. Sta. of .25 MAC

1463.3529.267

W.P. of .25 MAC

635.5212.710

B.L. of .25 MAC

0.00.0

Airfoil Section

Leading Wedge Angle - Deg.

10.0010.0

Trailing Wedge Angle - Deg.

14.9214.92

Leading Edge Radius

2.000.04

Void Area

13.170.0053

Blanketed Area

0.00.0ORIGINAL PAGE IS
OF POOR QUALITY

Table III (Conl'd)

MODEL COMPONENT: WING-W₁₁₆GENERAL DESCRIPTION: NOTE: Identical to W₁₁₄ except airfoil thickness. Dihedral angle is along trailing edge of wing. Geometric twist = 0.MODEL SCALE: 0.020

TEST NO.

DWG. NO. VL70-000140A, -000200DIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATAArea (Theo.) Ft^2

Planform

Span (Theo) In.

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, degrees

Incidence Angle, degrees

Aerodynamic Twist, degrees

Sweep Back Angles, degrees

Leading Edge

Trailing Edge

0.25 Element Line

Chords:

Root (Theo) B.P.O.O.

Tip, (Theo) B.P.

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

EXPOSED DATAArea (Theo) Ft^2

Span, (Theo) In. BP108

Aspect Ratio

Taper Ratio

Chords

Root BP108

Tip 1.00 $\frac{b}{2}$

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section (Rockwell Mod NASA)

XXXX-64

Root $\frac{b}{2}$ =Tip $\frac{b}{2}$ =

Data for (1) of (2) Sides

Leading Edge Cuff

Planform Area Ft^2

Leading Edge Intersects Fus M. L. @ Sta

Leading Edge Intersects Wing @ Sta

TABLE IV. - PRESSURE TAP NUMBER ASSIGNMENTS

ORBITER FUSELAGE

X _o STA	Z _o W.L	Tap LH	No. RH
7.60	7.08	—	2
8.24	7.08	—	6
7.60	7.26	—	4
8.24	7.26	—	8
15.08	7.54	—	12
15.48	7.54	17	18
15.08	7.76	13	14
15.48	7.76	19	20
18.48	7.02	29	30
18.90	7.02	35	36
18.48	7.24	31	32
18.90	7.24	37	38

X _o STA	Z _o WL	Tap LH	No RH
17.90	7.54	21	22
18.30	7.54	25	26
17.90	7.76	23	24
18.30	7.76	27	28
19.70	7.54	39	40
20.10	7.54	43	44
19.70	7.76	41	42
20.10	7.76	45	46
22.36	7.54	47	48
22.76	7.54	53	54
22.36	7.76	49	50
22.76	7.76	55	56

X _o STA	Z _o WL	Tap LH	No RH
27.62	6.72	75	76
28.02	6.72	79	80
27.62	6.98	77	78
28.02	6.98	81	82
26.84	6.72	59	60
27.08	6.72	63	64
26.84	6.86	61	62
27.08	6.86	65	66
27.40	6.18	67	68
27.54	6.18	71	72
27.40	6.28	69	70
27.54	6.28	73	74

ORB. FUS. RADIAL LOCATIONS

ϕ X _o	11.40	15.20	18.84	22.50	26.14
120	10	16	34	52	58
240	9	15	33	51	57

ORB. BODY FLAP - UPPER SURFACE

X _o	Y _o (B.L)				
STA	-1.89	-0.82	0.0	0.82	1.89
31.10	700	704	382	708	383
31.80	702	706	384	710	385

ORB. BODY FLAP - LWR SURFACE

X _o	Y _o (B.L.)				
STA	-1.89	-0.82	0.0	0.82	1.89
31.10	701	705	386	709	387
31.80	703	707	388	711	389

TABLE IV. - Concluded.

ORBITER BASE

Y _O BL	Z _O WL	Tap No.
-2.30	6.59	379
-.438	6.10	717
0.00	6.59	380
.438	6.10	718
2.30	6.59	381
-2.30	7.15	716
0.00	7.15	720
2.30	7.15	719
-2.30	8.00	374

Y _O BL	Z _O WL	Tap No.
0.00	7.72	376
2.30	8.00	378
-2.09	8.38	715
-.87	8.21	375
.87	8.21	377
2.09	8.38	721
-2.45	8.88	372
-1.73	8.70	714
1.73	8.70	722

Y _O BL	Z _O WL	Tap No.
2.45	8.88	373
-1.77	9.18	713
1.77	9.18	723
-1.00	10.0	371
1.00	10.0	370
1.9	9.92	724

EXTERNAL TANK

X _T STA	φ DEG.							
	0	45	90	135	180	225	270	315
19.0		800		801		802		803
38.0	518		521		804		515	
41.16	805		806		807		808	

ET BASE

R/ ROD	φ							
	0	45	90	135	180	225	270	315
0	541							
0.45							809	
.635	810		811		812		813	
.840	814	815	816	817	818		819	820
.895	821		822	823	824			825
.946	826		827	828	829	830		831
1.00				832		833		834

SRB (Inside Skirt)

X _B STA	φ			
	0	90	180	270
380	841	842	843	844

Notes

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

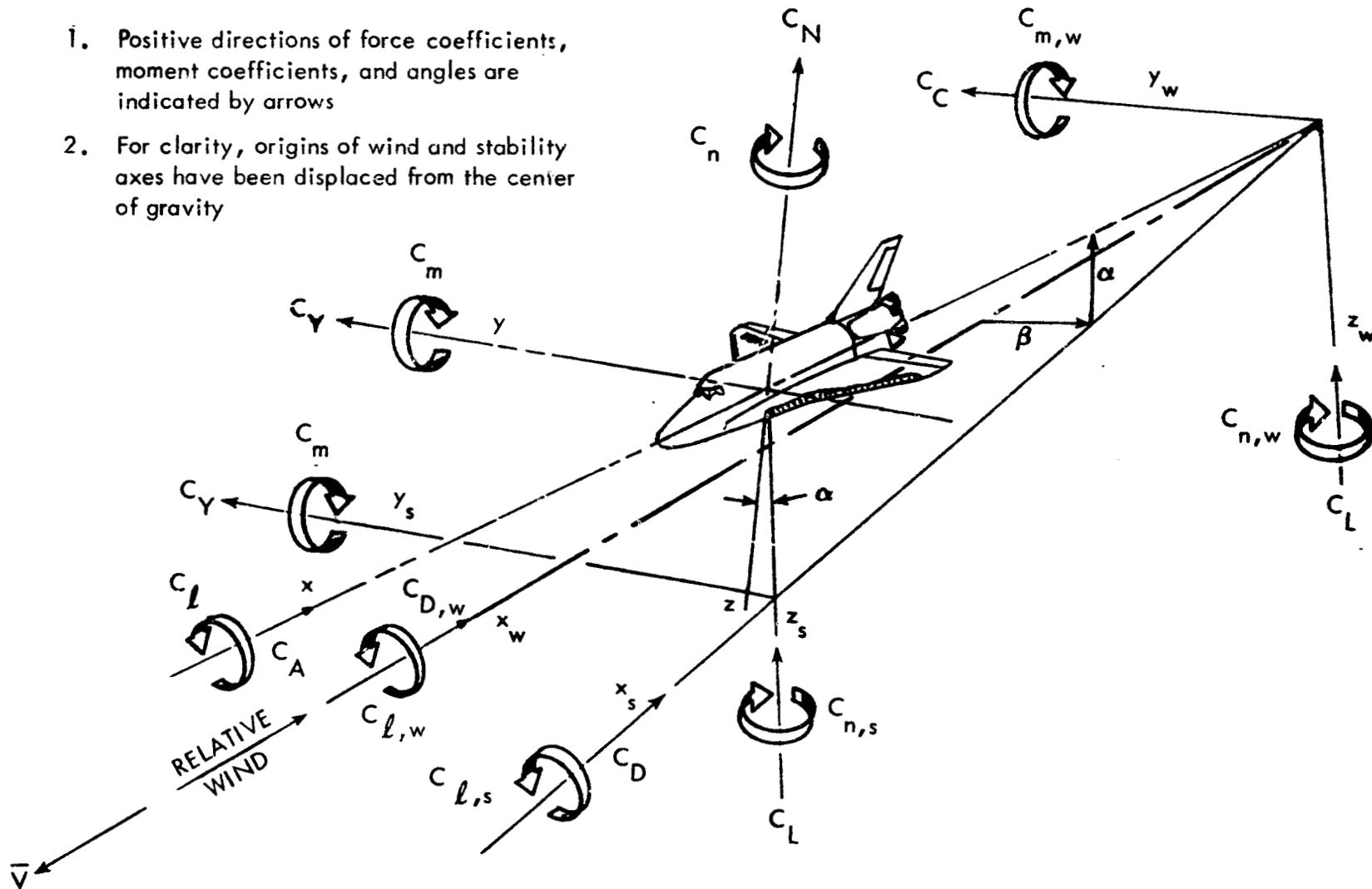


Figure 1. - Axis systems.

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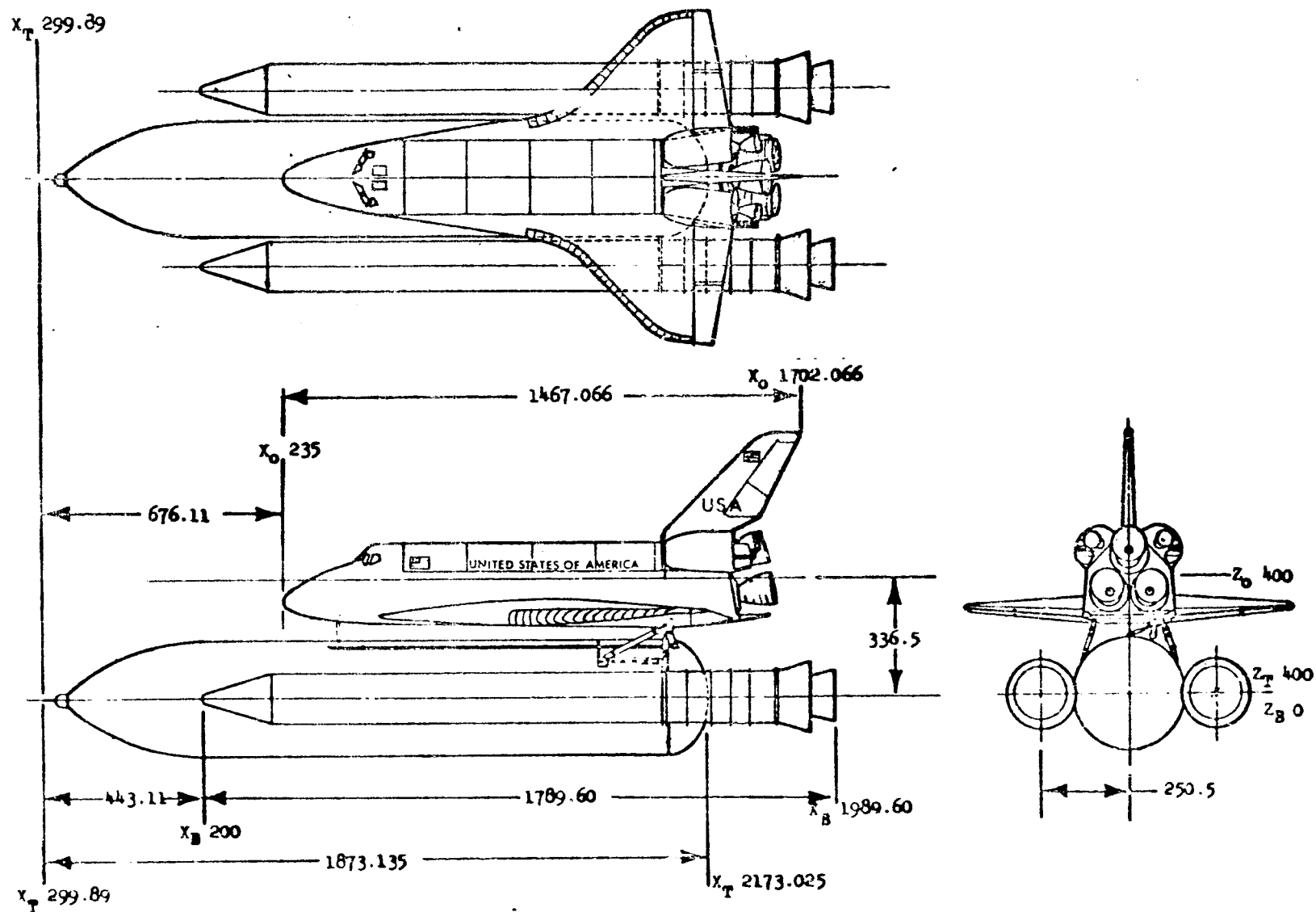
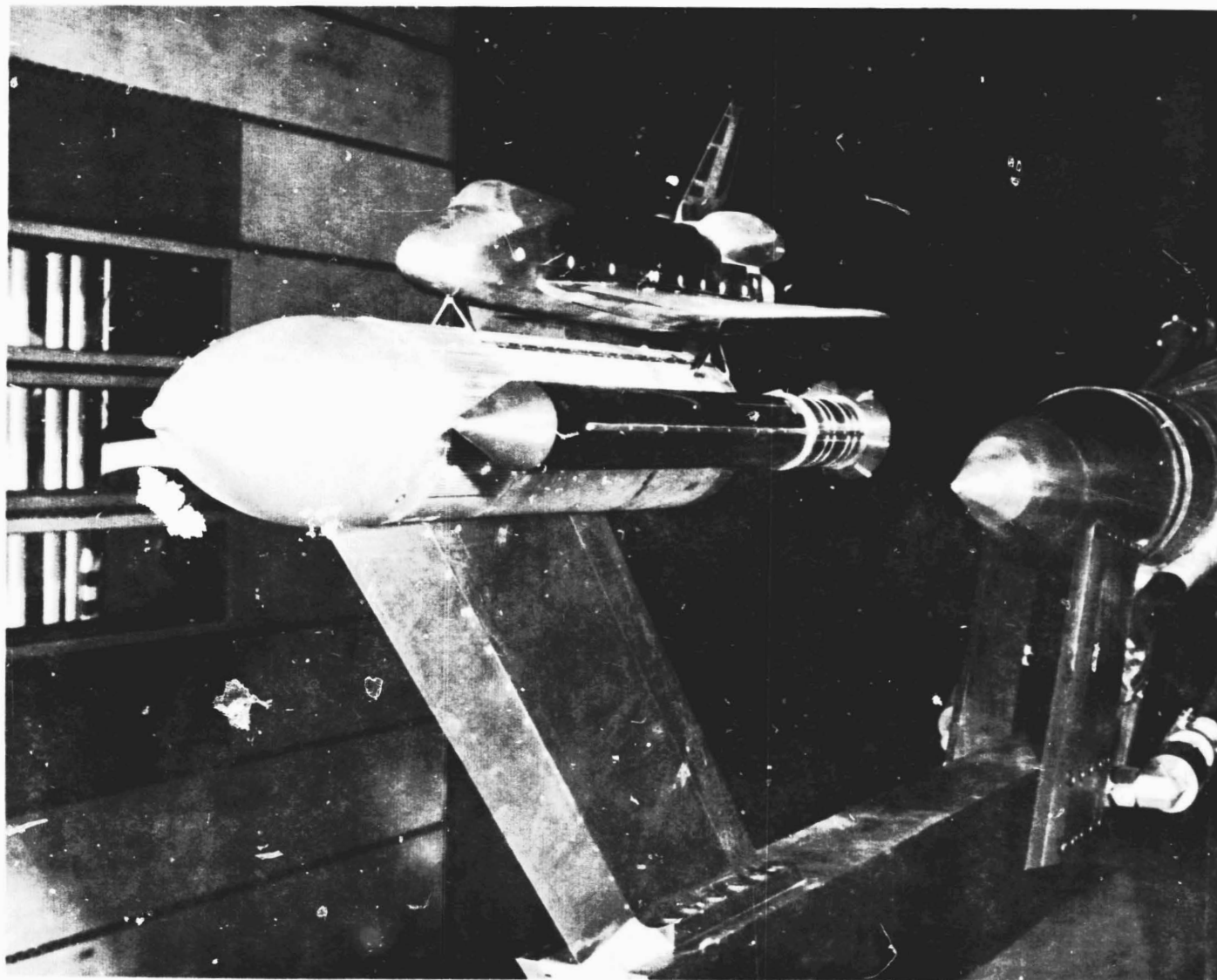
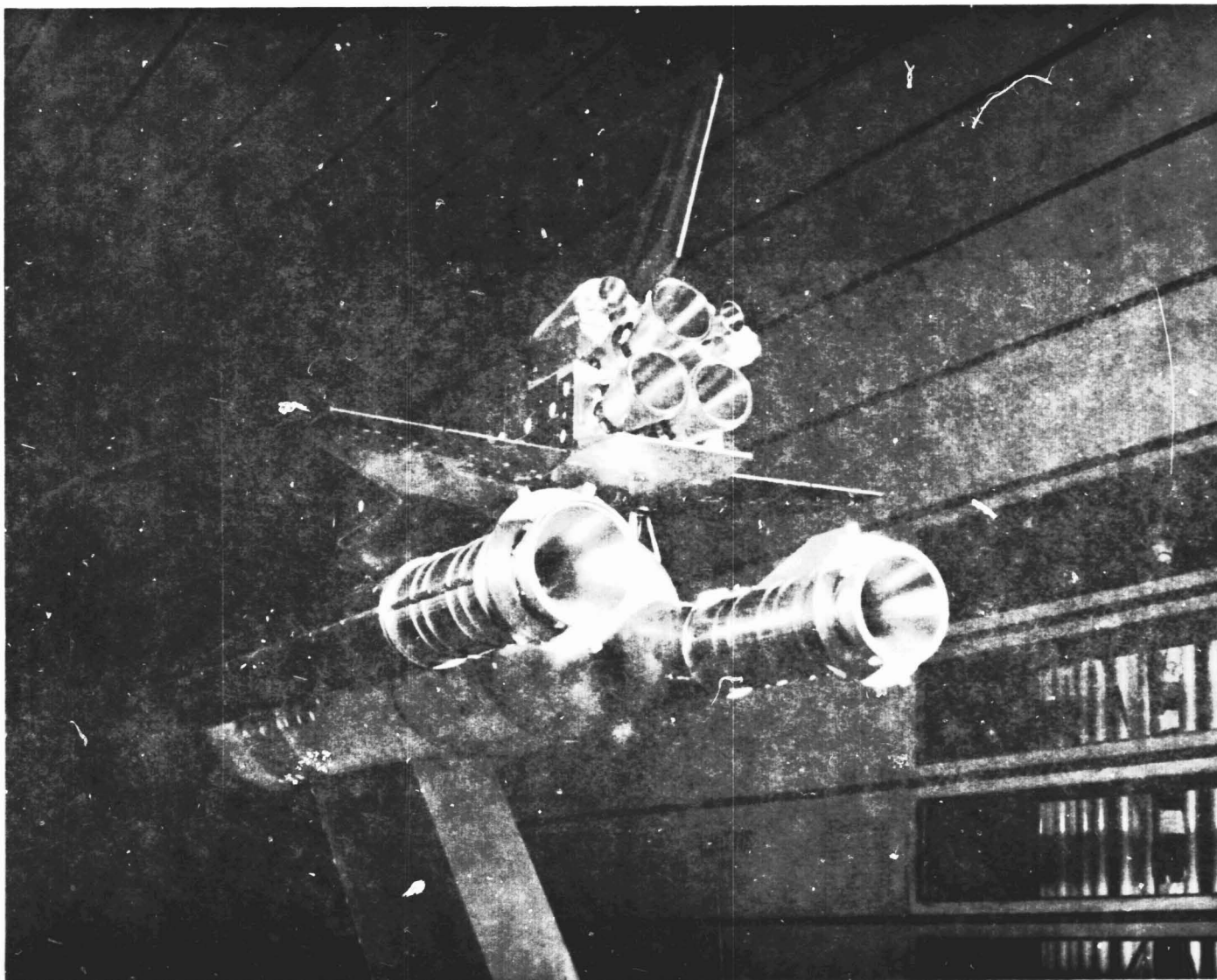


Figure 2. - Integrated space shuttle vehicle launch configuration.



a. Model 88-OTS Installation, Front View

Figure 3. - Model photographs.



b. Model 88-01S Installation, Rear View

Figure 3. - Concluded.

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DATA FIGURES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4XA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000 IN.
(RE4X90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

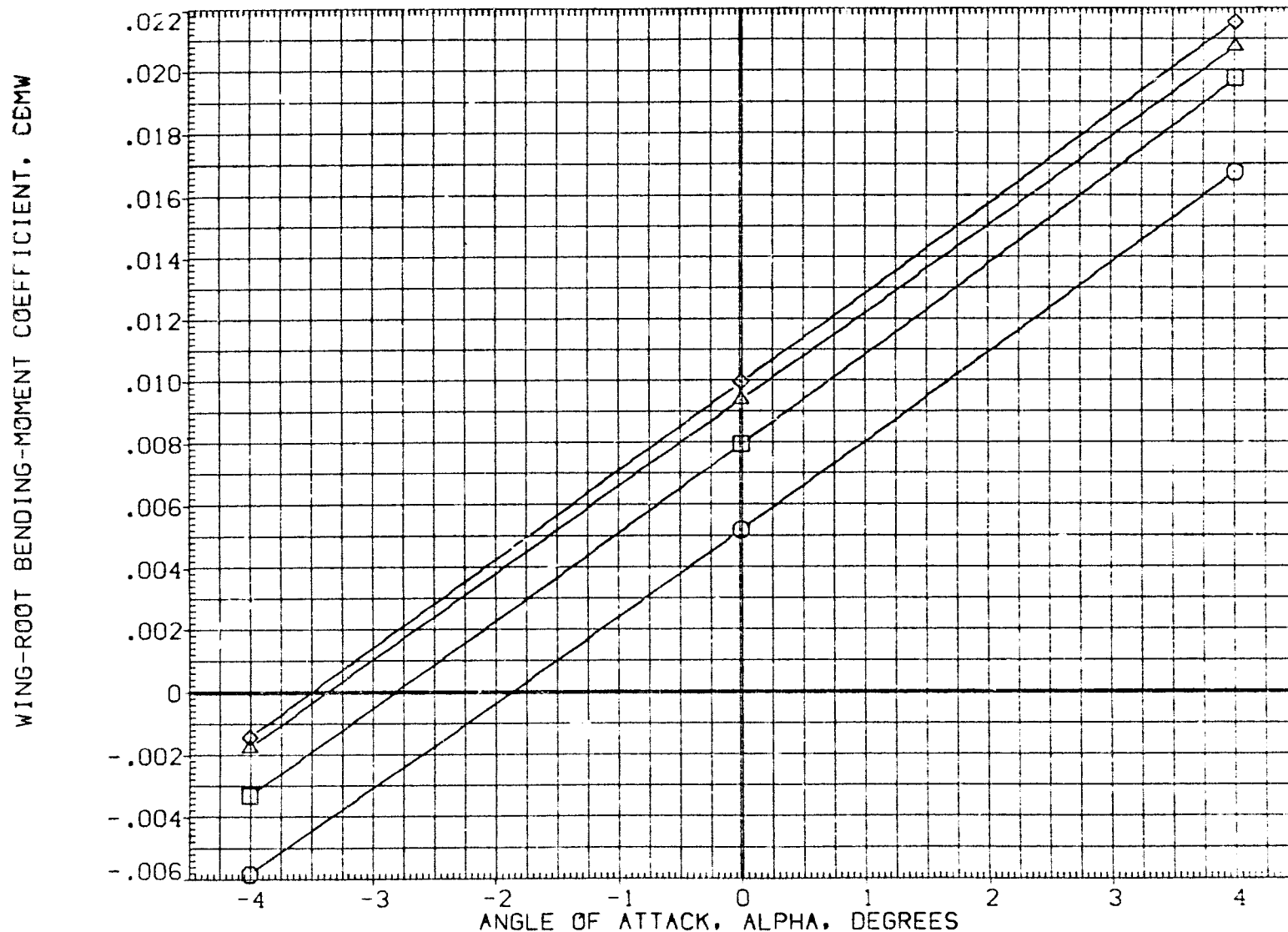






FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4XA0) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4X90) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X74) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

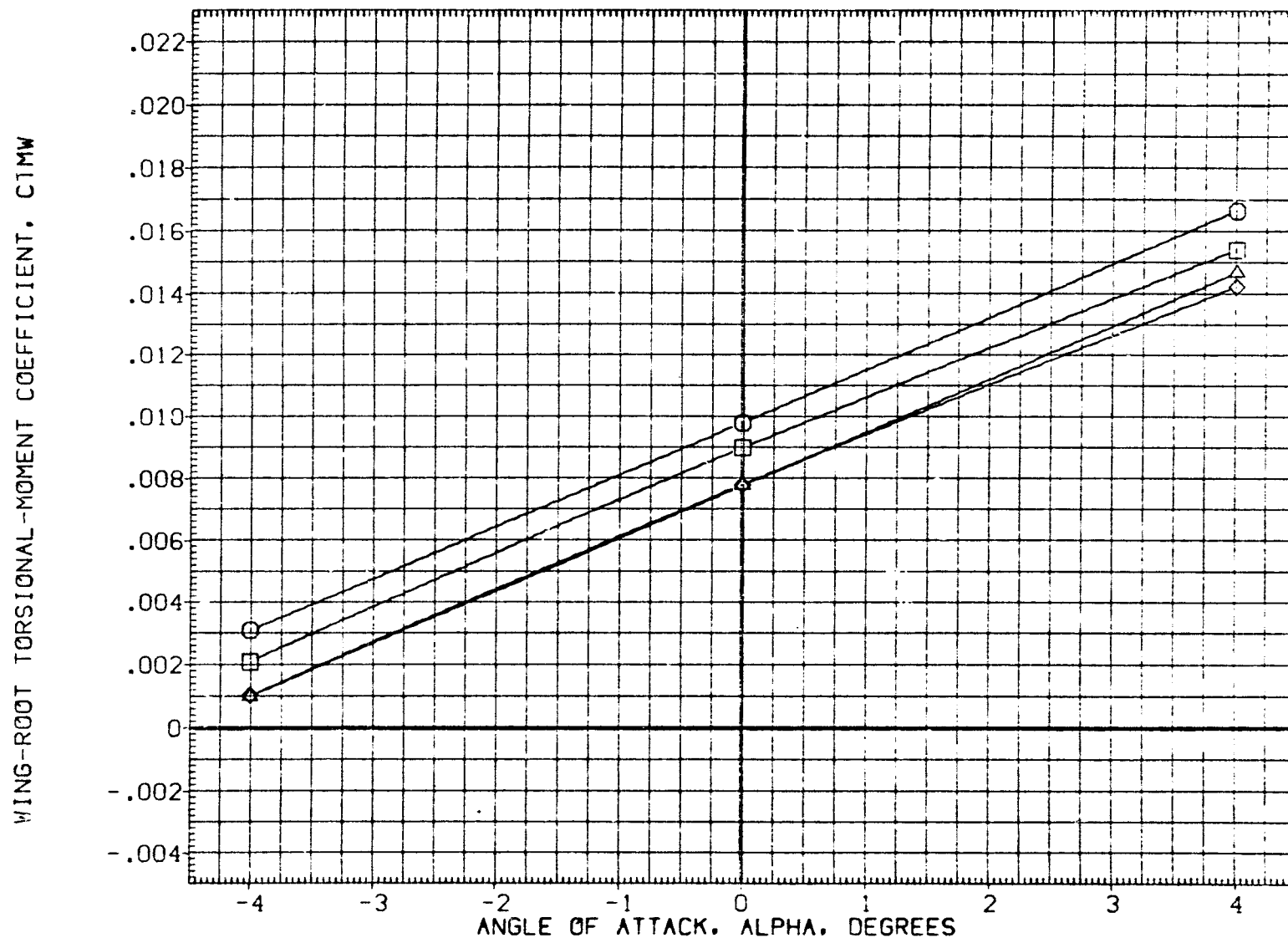


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-19	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4XA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000 IN.
(RE4X90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

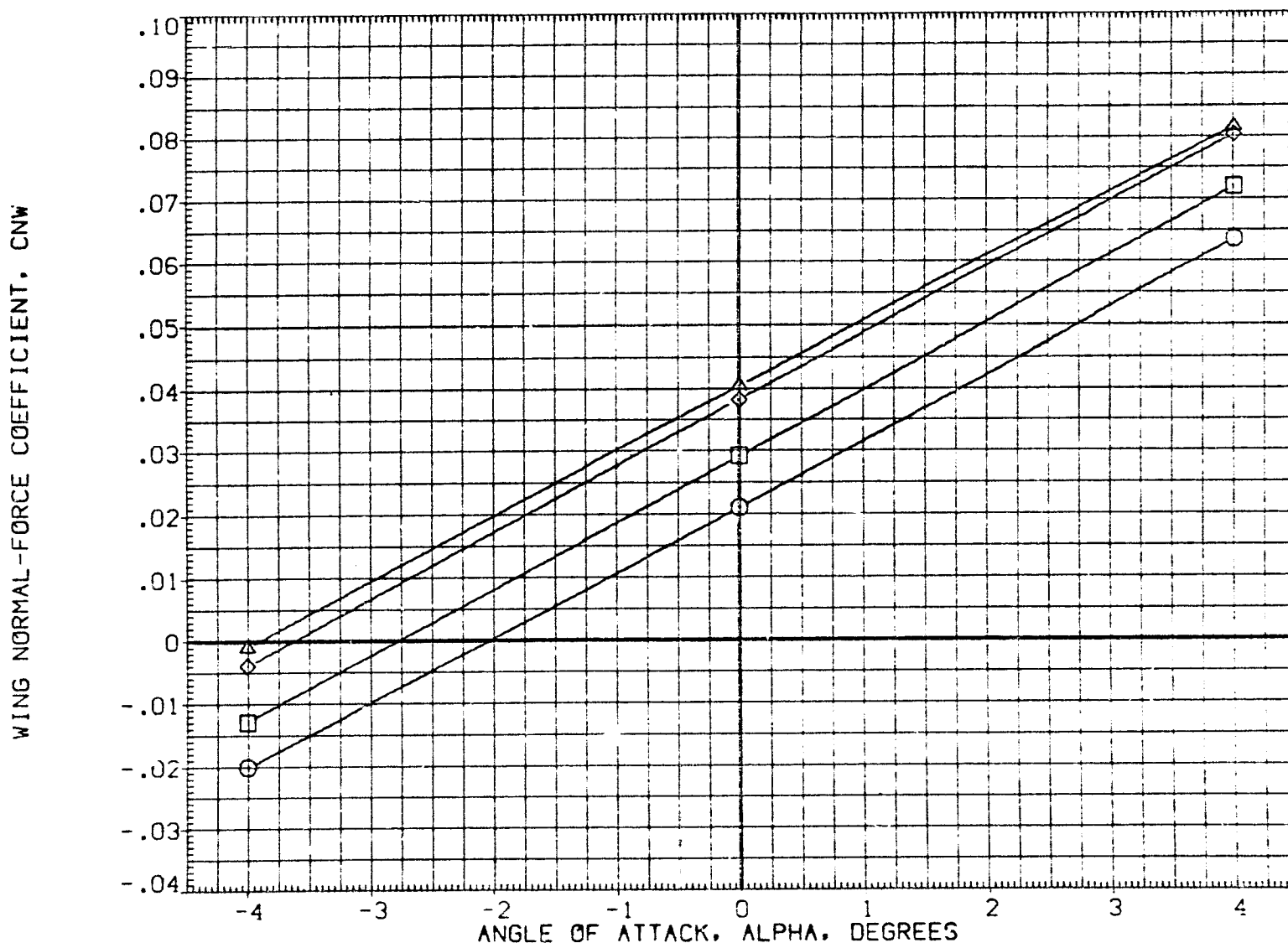


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF
 (A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	○	ARC 11-023 1A80 0°S (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X84)	□	ARC 11-023 1A80 0°S (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4X53)	◇	ARC 11-023 1A80 0°S (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X64)	△	ARC 11-023 1A80 0°S (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000
							YMRP	.0000
							ZMRP	.0000
							SCALE	.0200

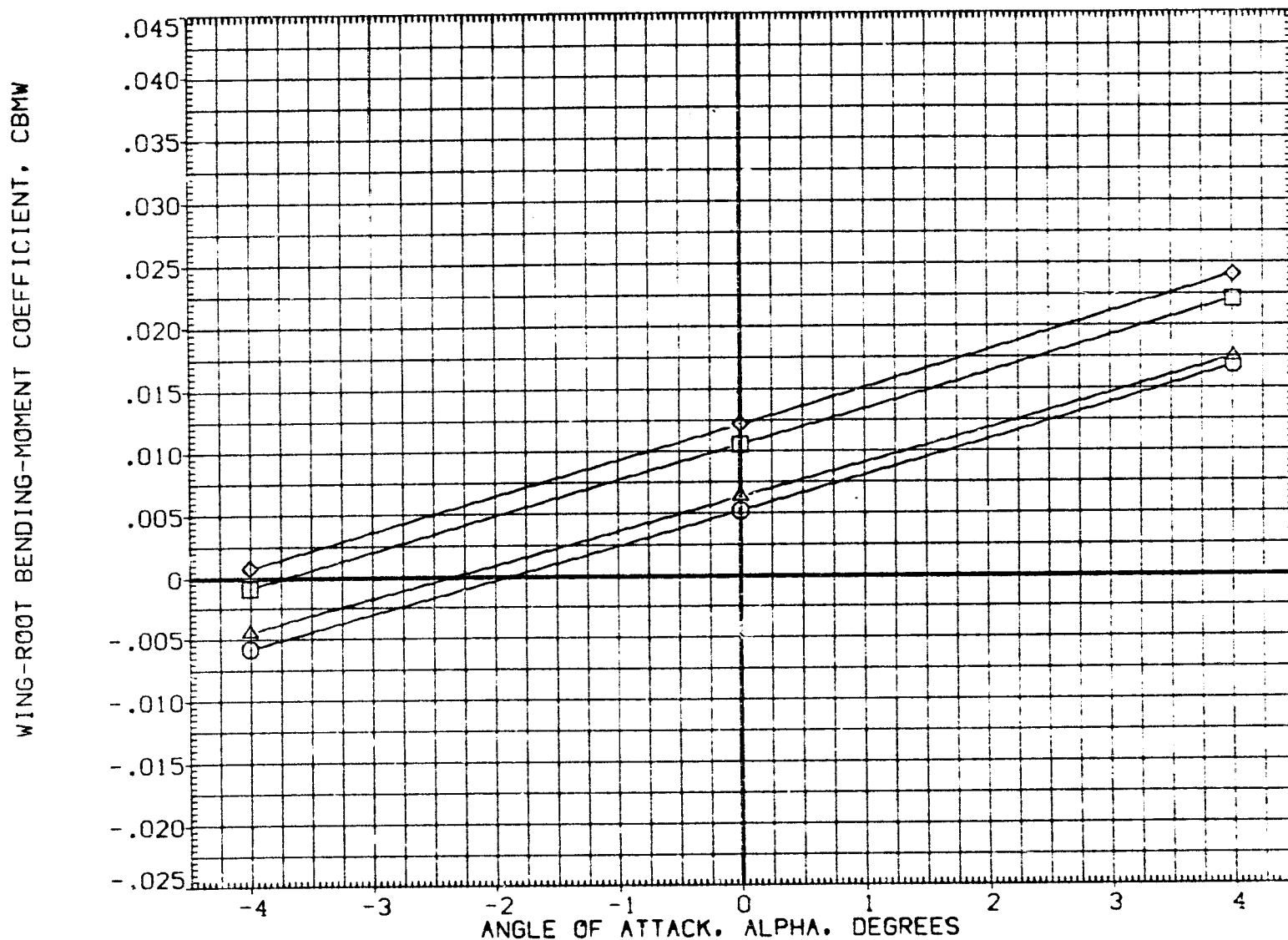


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X84) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4X53) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X64) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

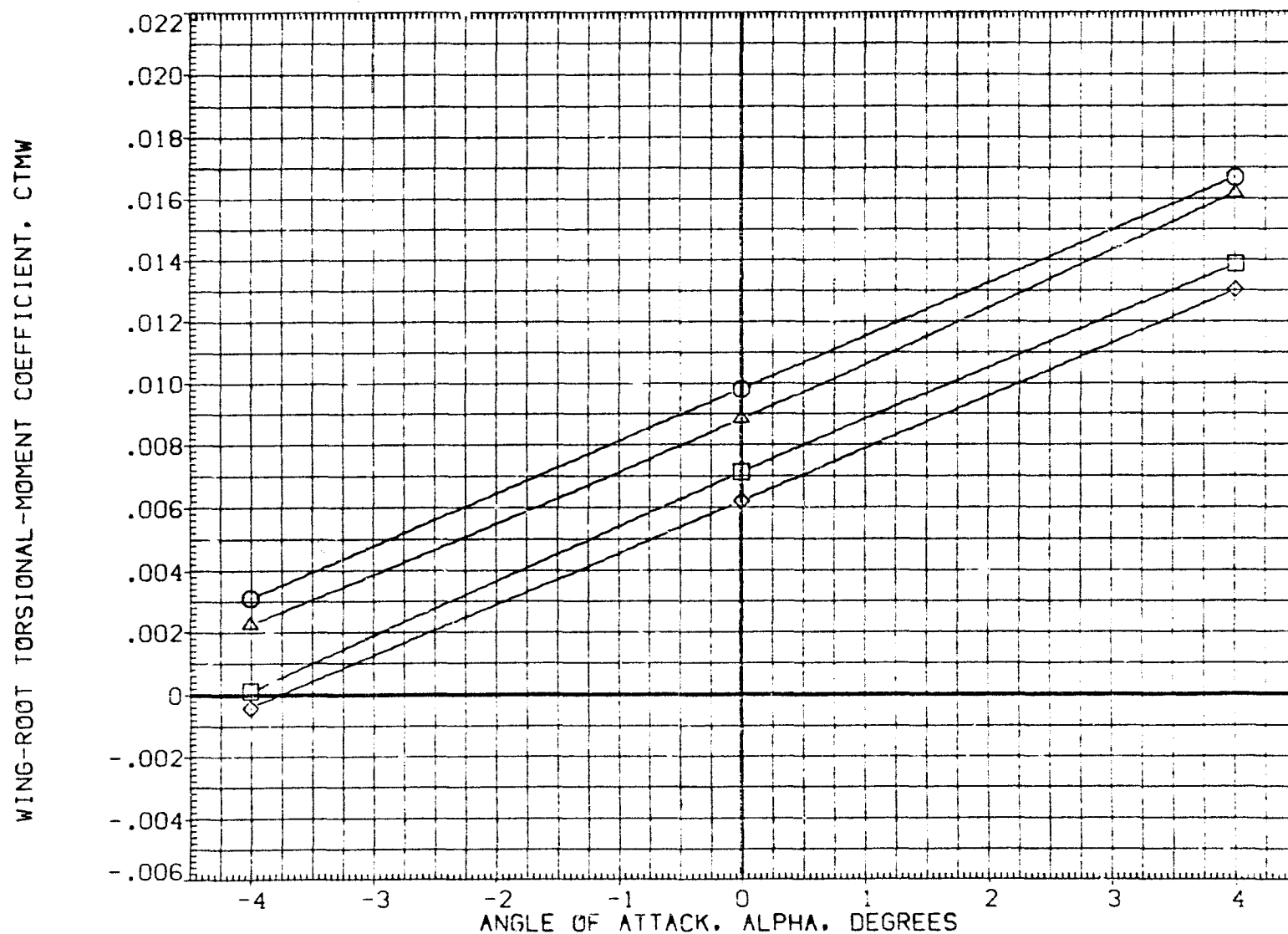


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SC.FT.
(RE4X84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4X53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

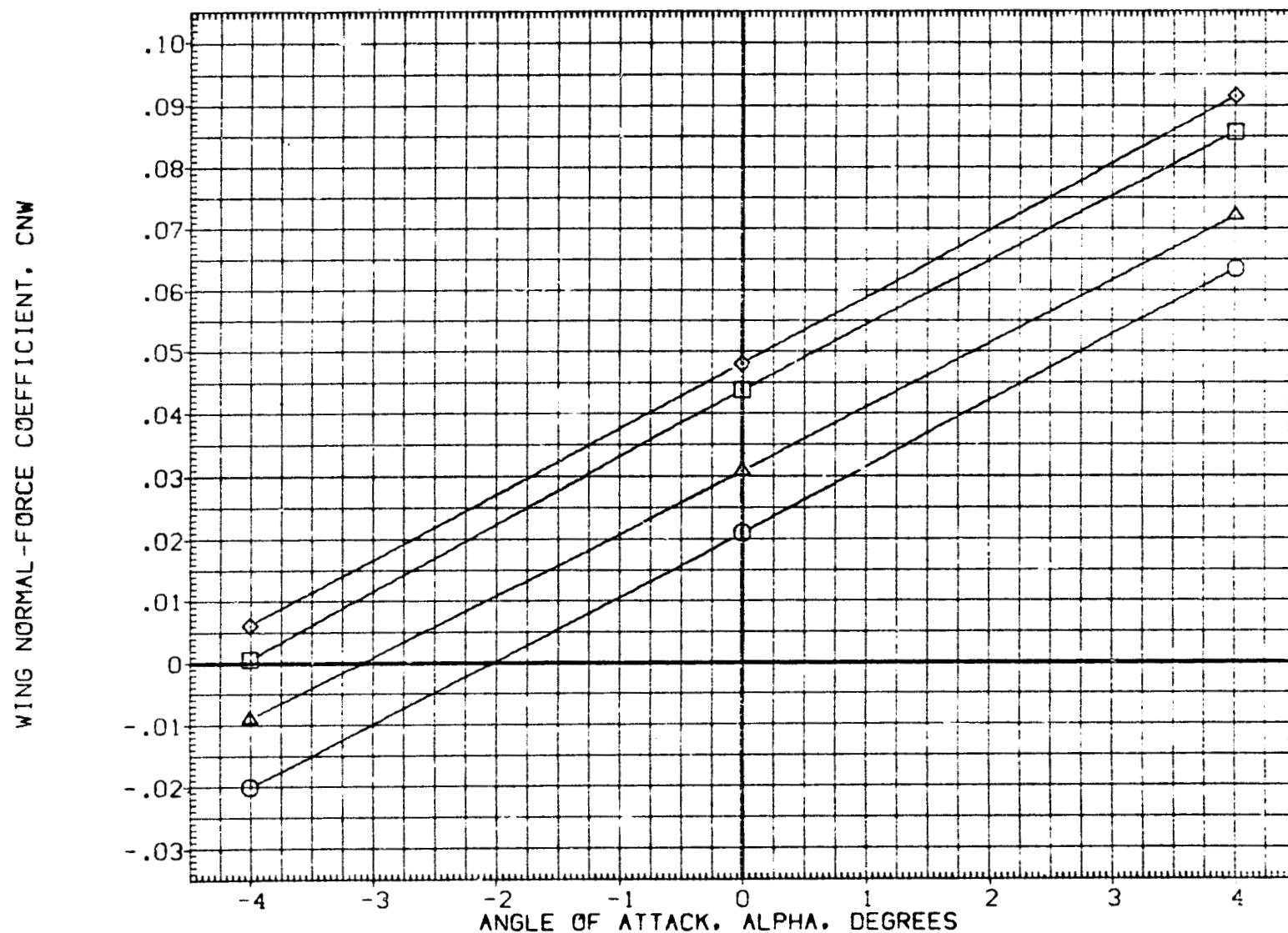


FIG. 4 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4XA1)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000 IN.
(RE4X91)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X75)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

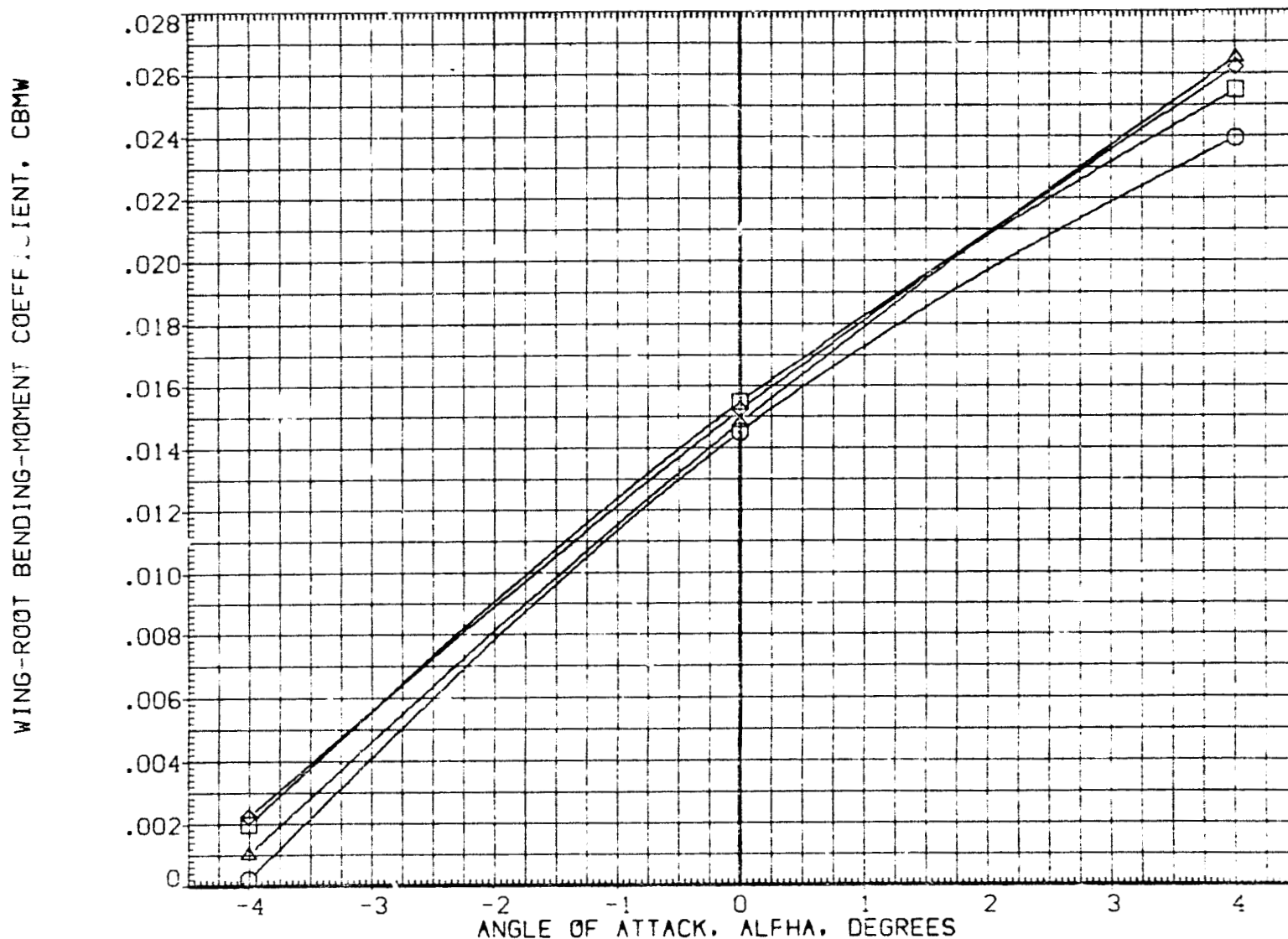


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF
 (A) BETA = .00 PAGE 7

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50. FT.
(RE4XA1)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	17.5
(RE4X91)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	17.5
(RE4X75)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000	17.5
						YMRP	.0000	17.5
						ZMRP	.0000	17.5
						SCALE	.0200	

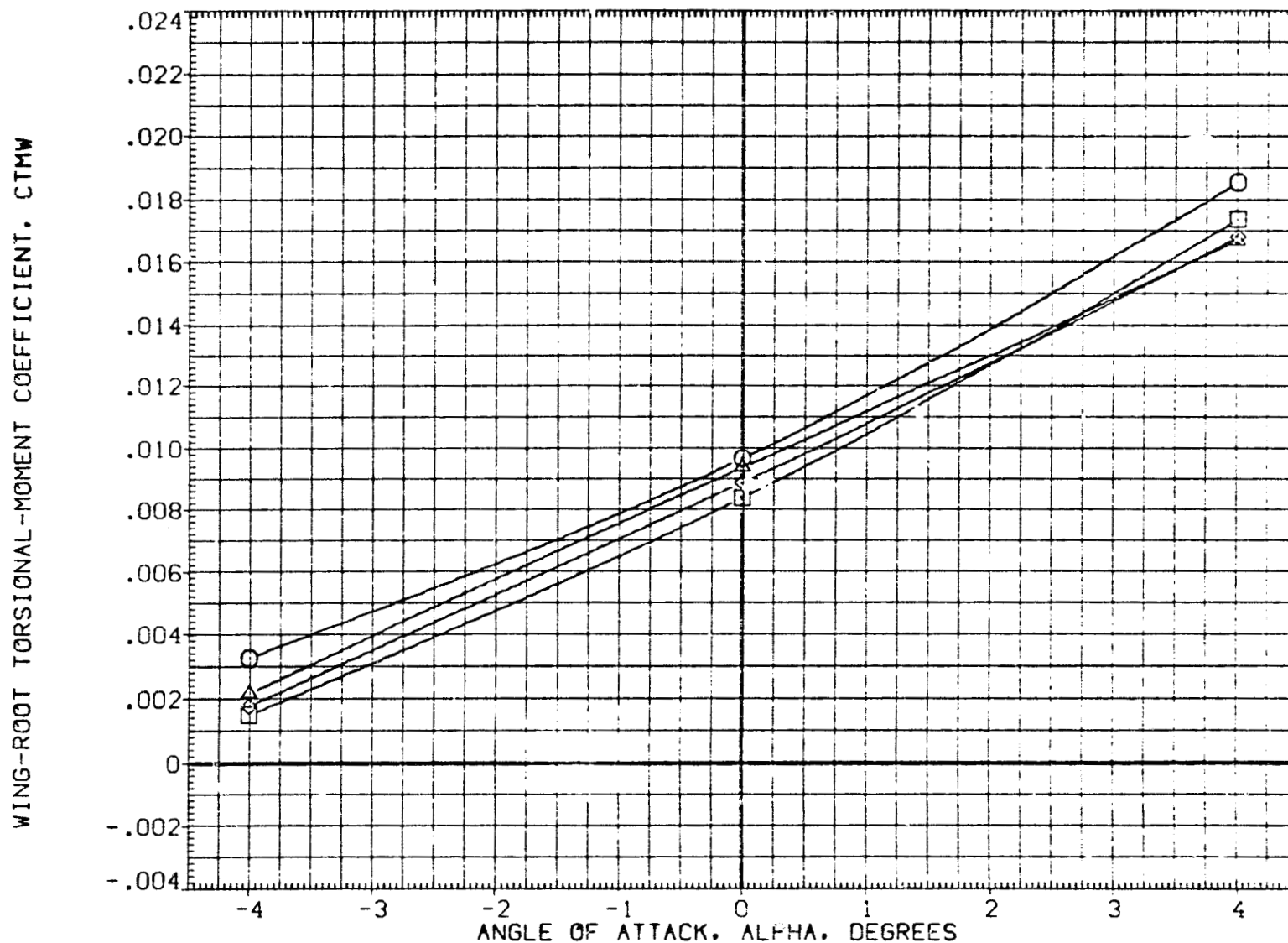


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9

(A) BETA = .00

PLUMES OFF

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4XA1)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4X91)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X75)	△	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	YMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

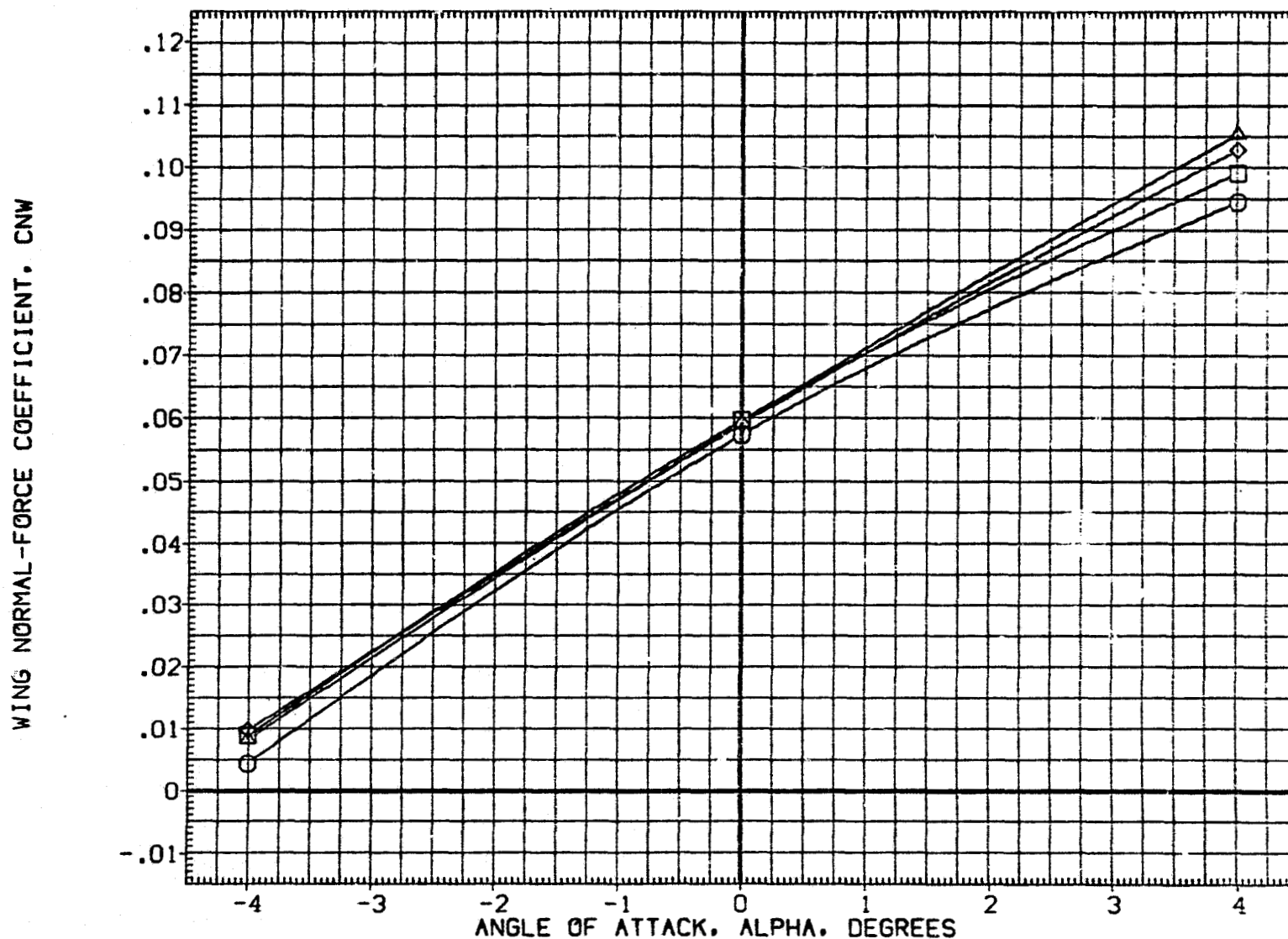


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4X54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

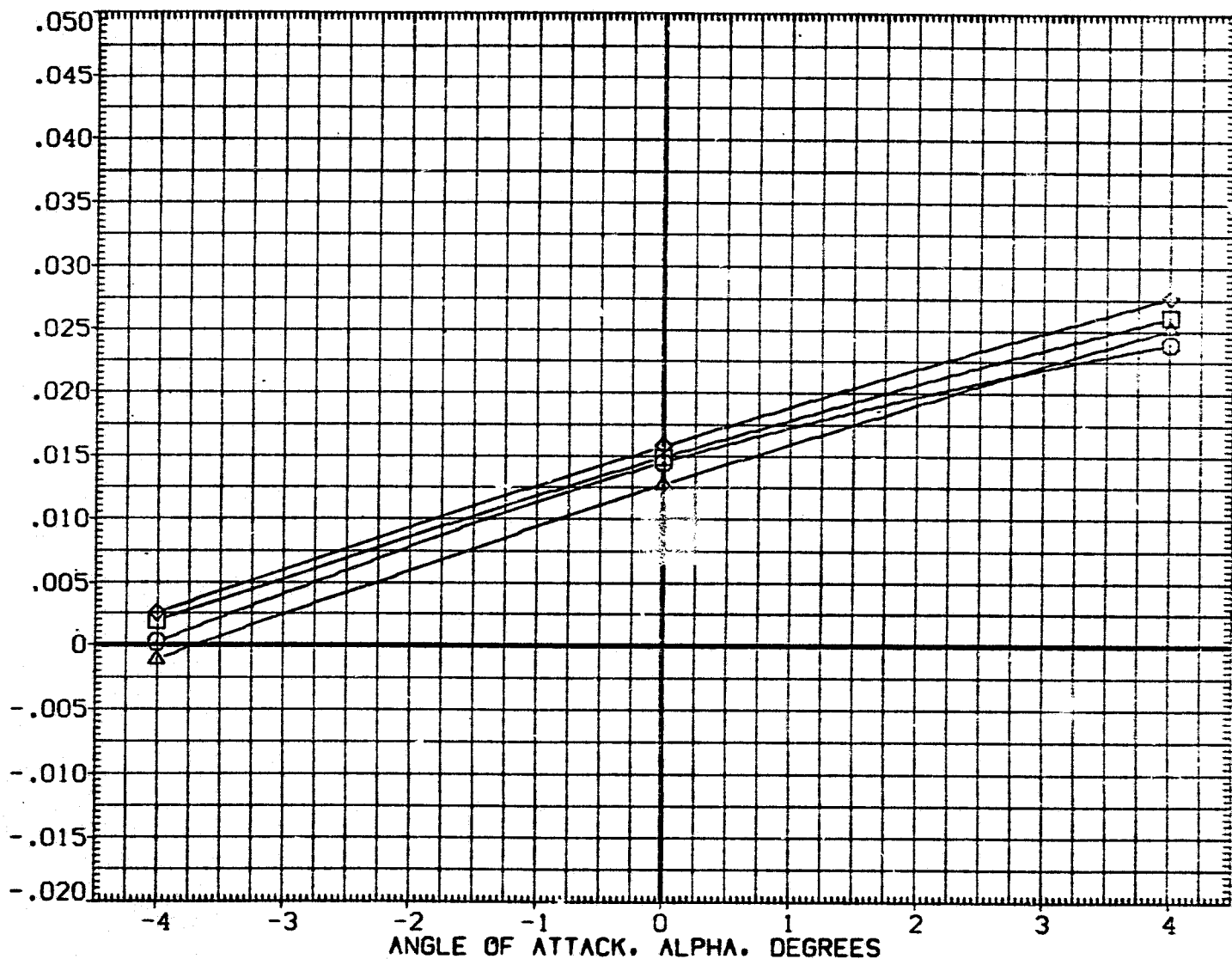


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4X54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

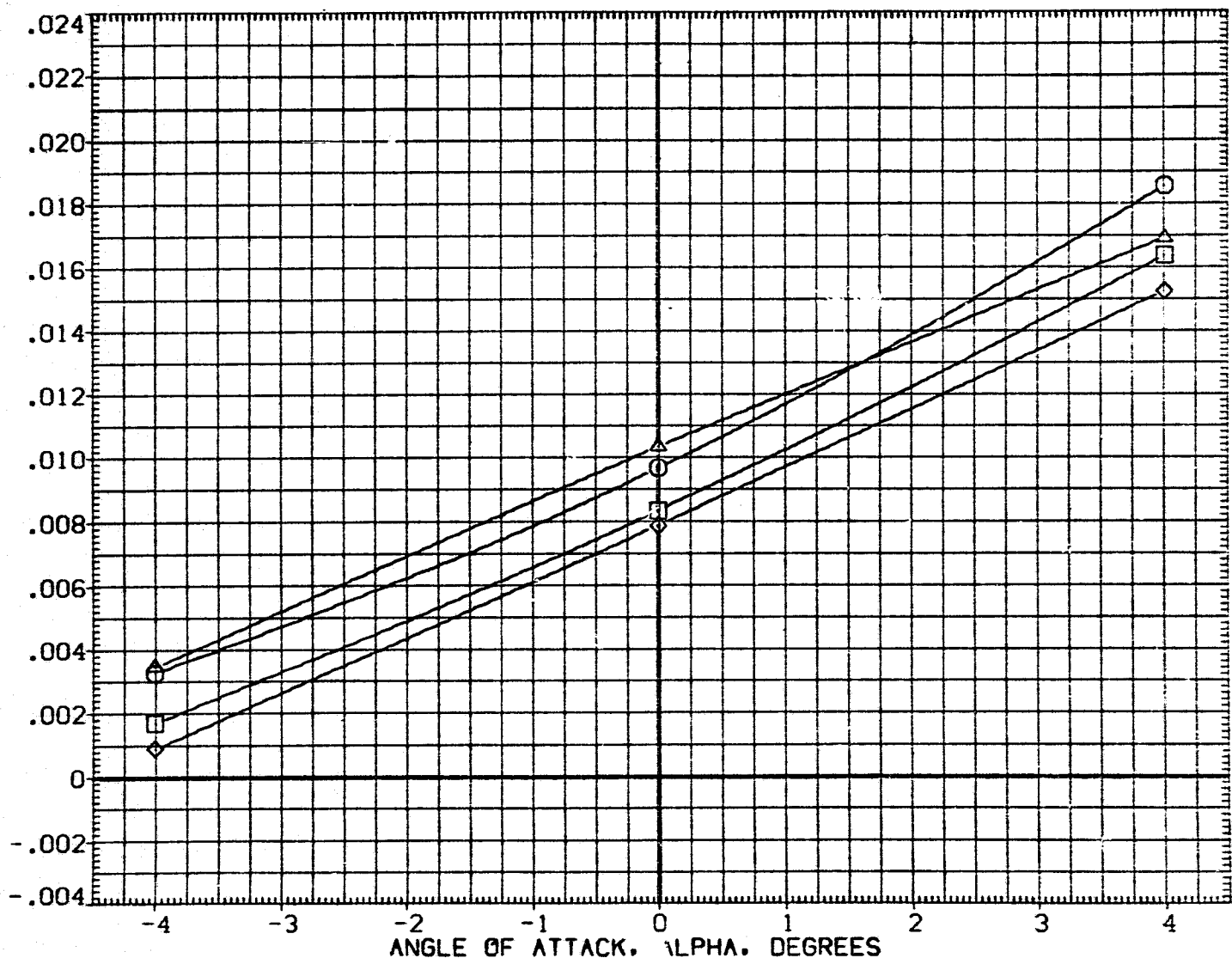


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X85)	ARC 11-023 1A80 OTS (SRB OFF) (SCME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4X54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

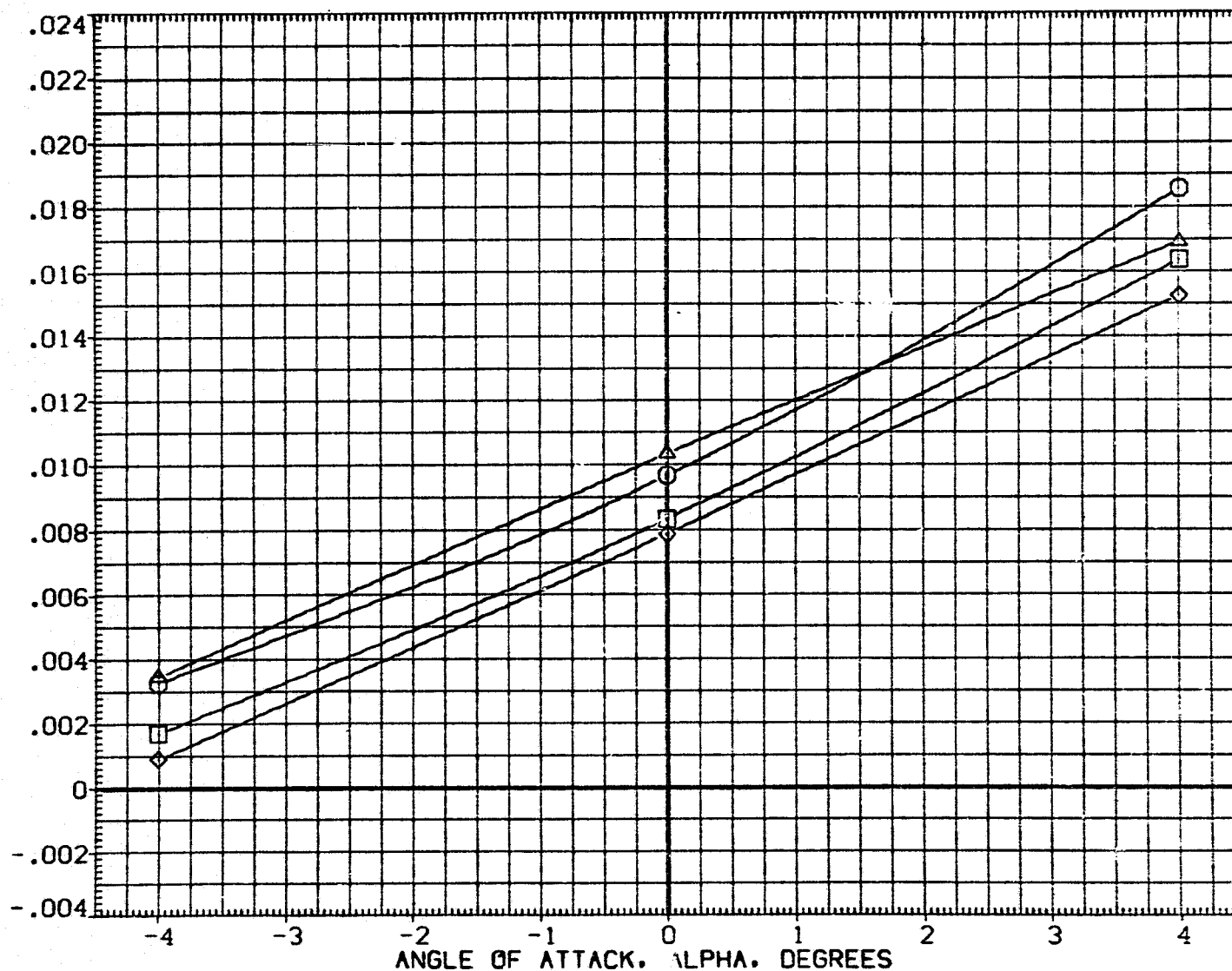


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4X85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4X54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

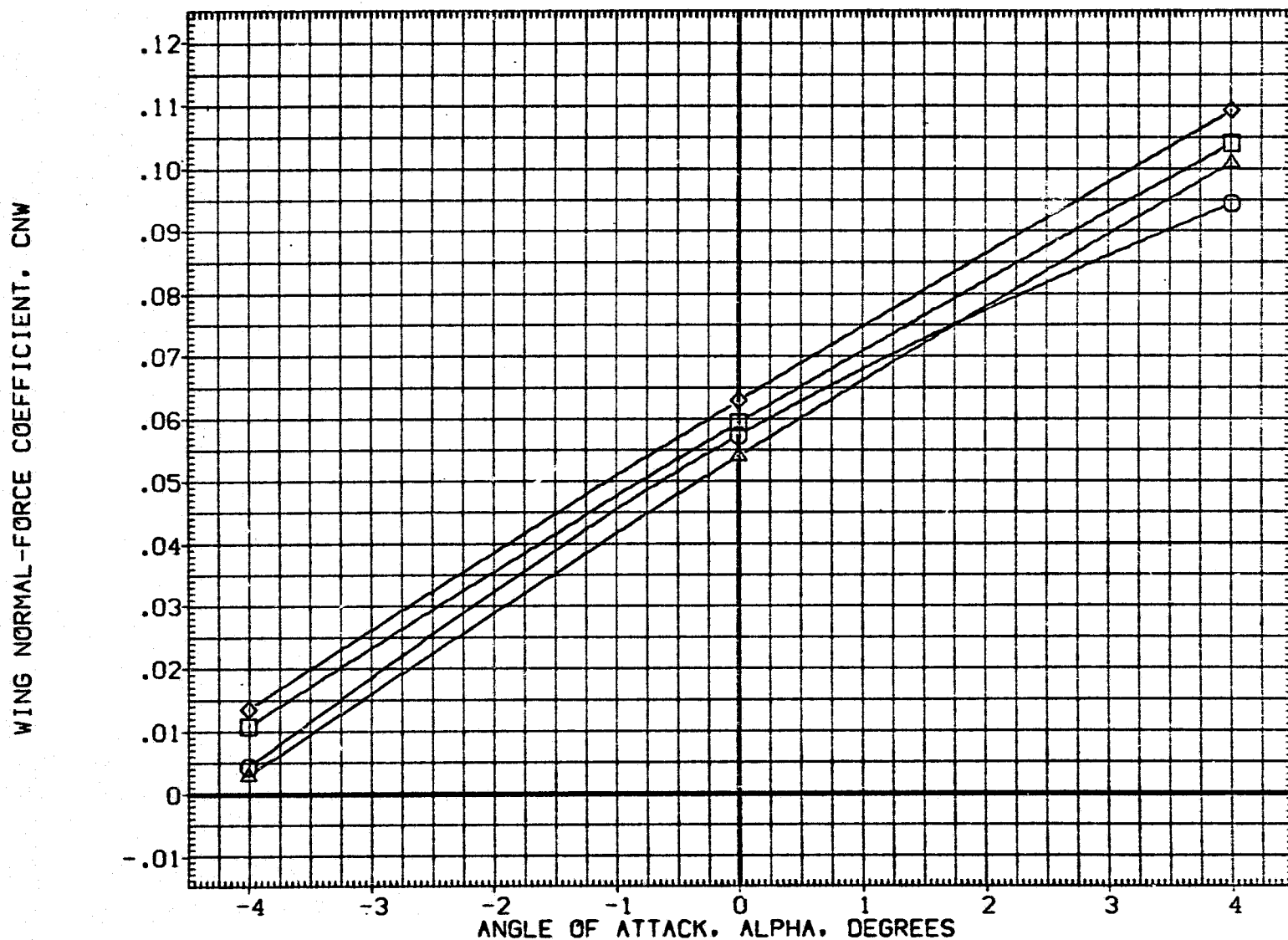


FIG. 5 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4XA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

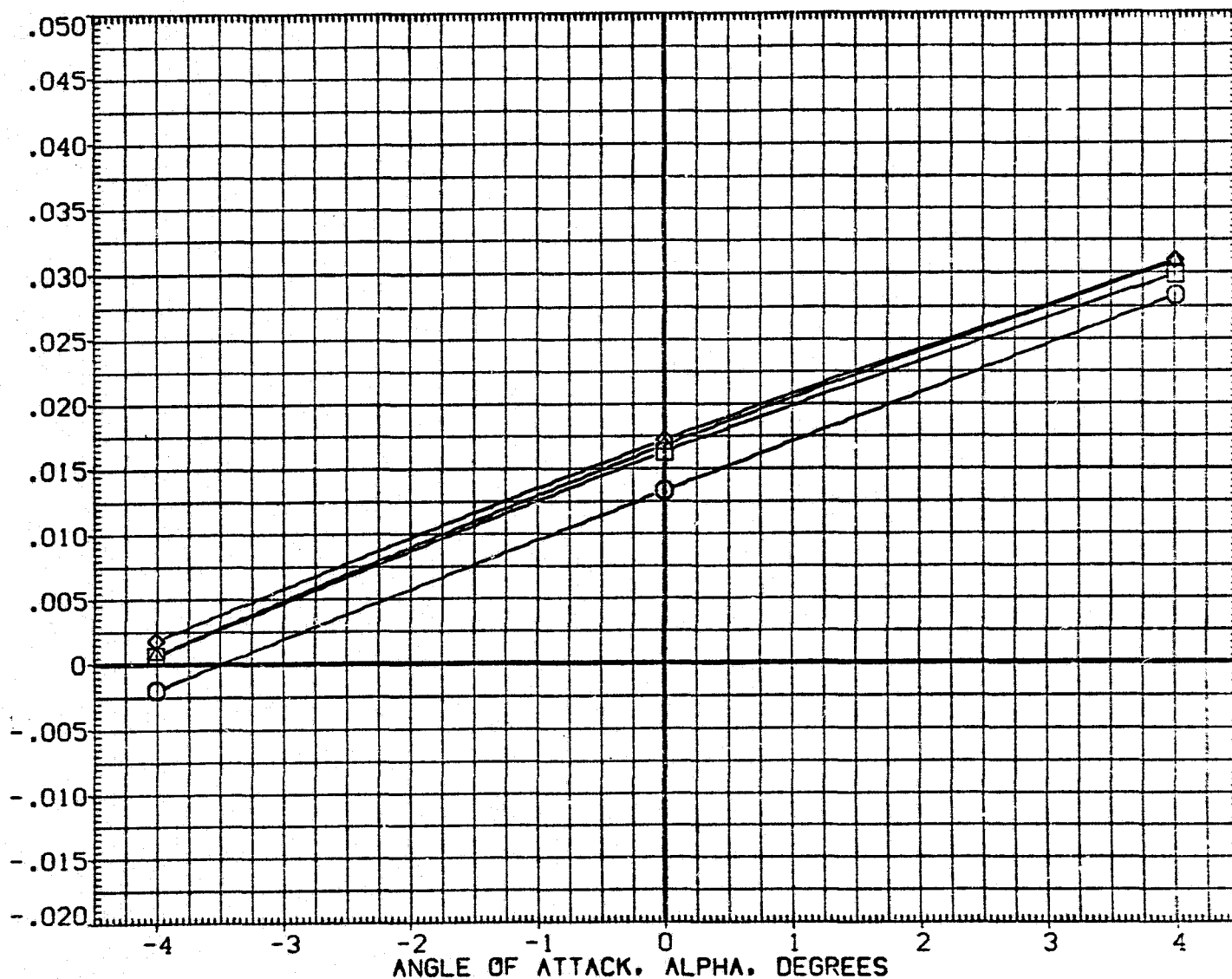


FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4XA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

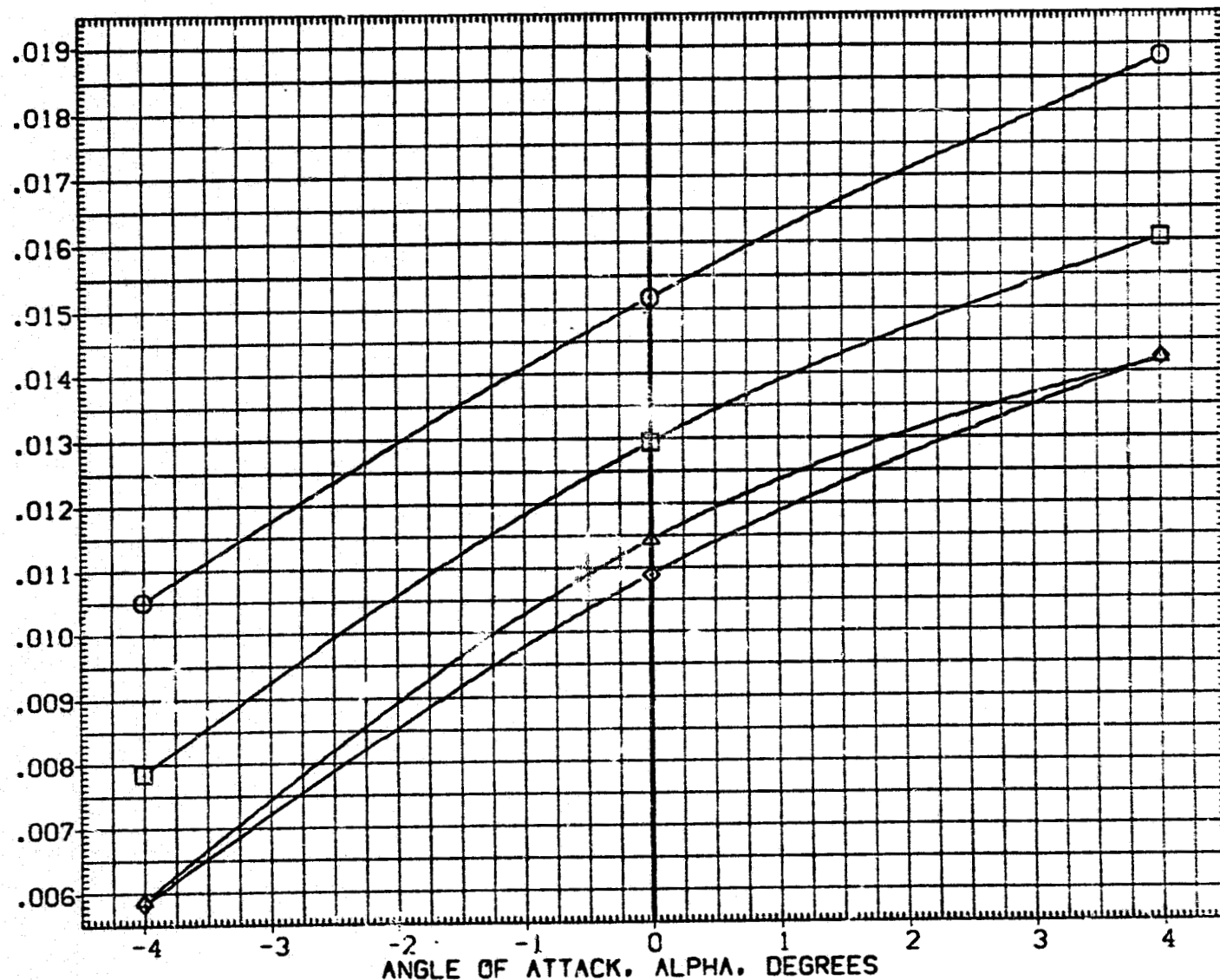


FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X30)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4XA2)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X92)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X76)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

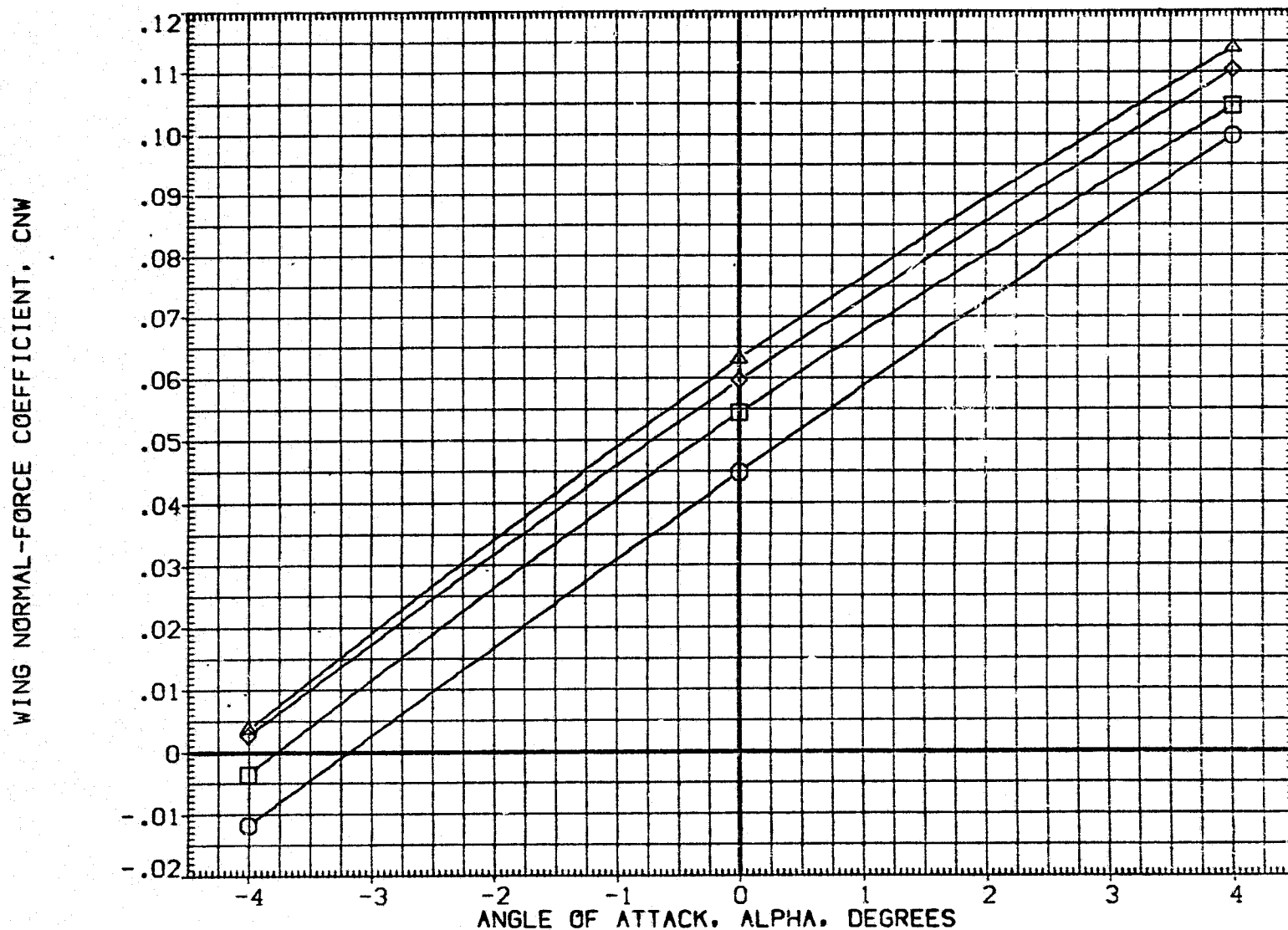


FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4X86)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

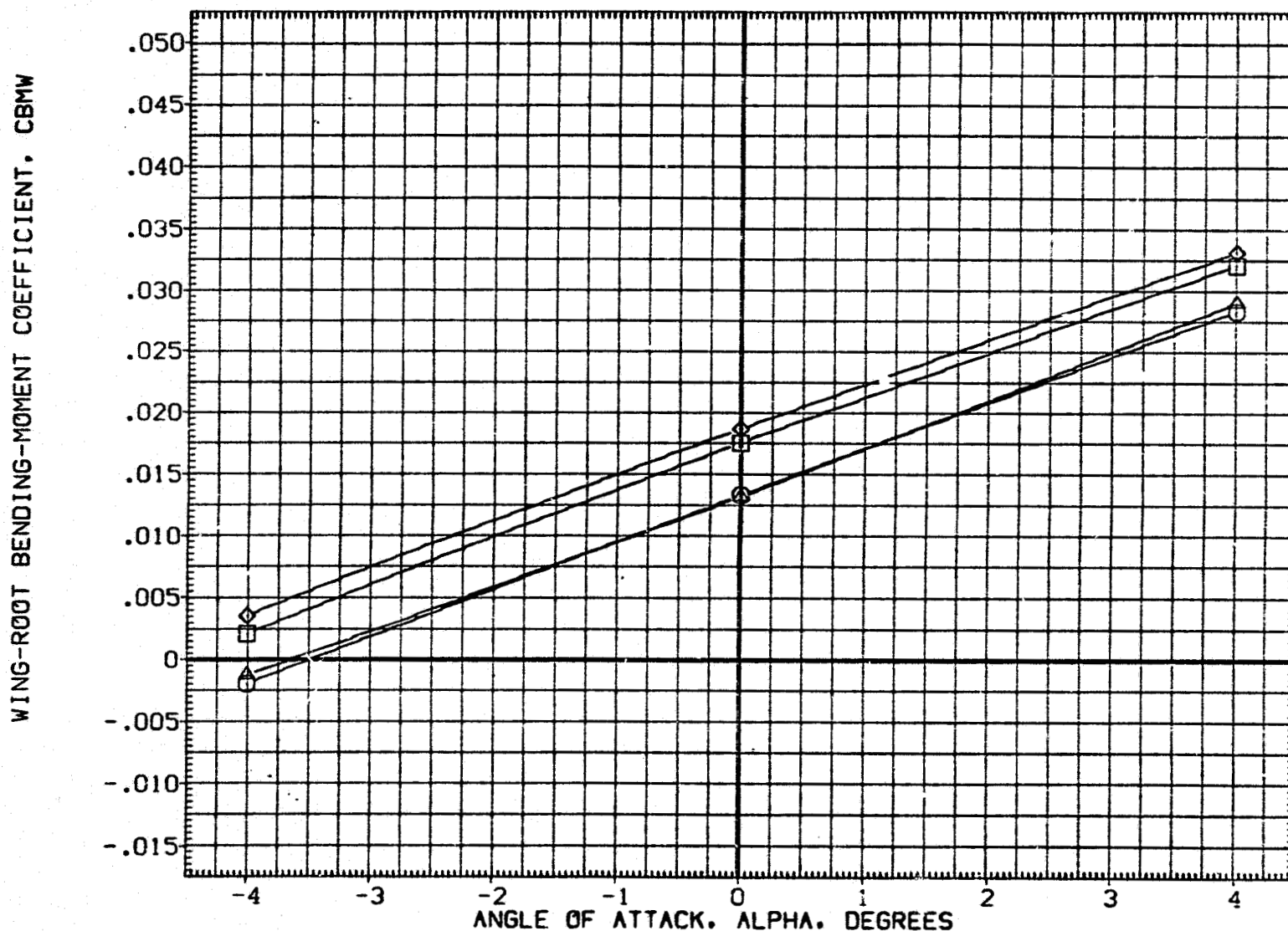


FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X86)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X55)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X66)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

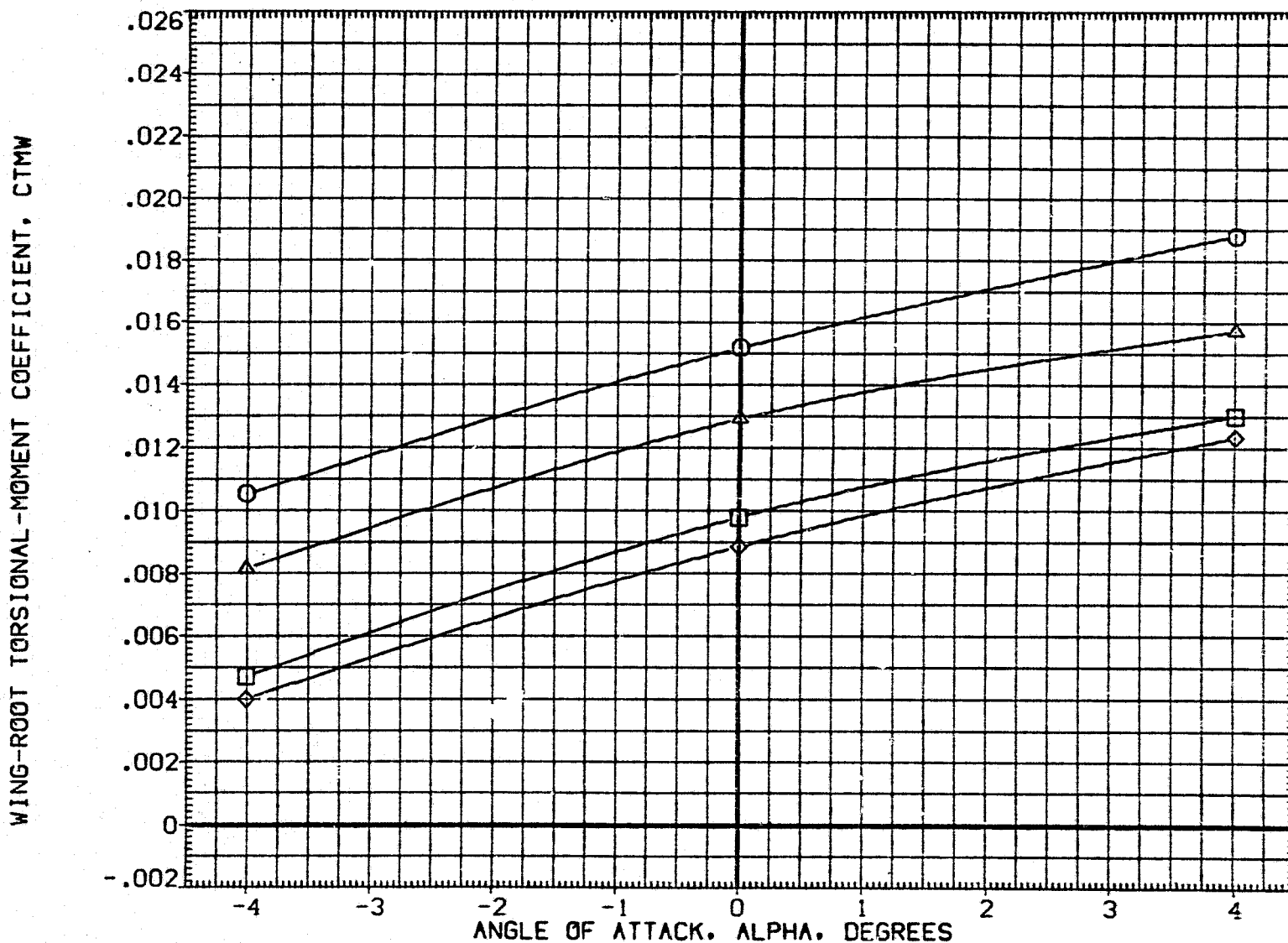


FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SFEF	2690.0000	SQ.FT.
(RE4X86)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

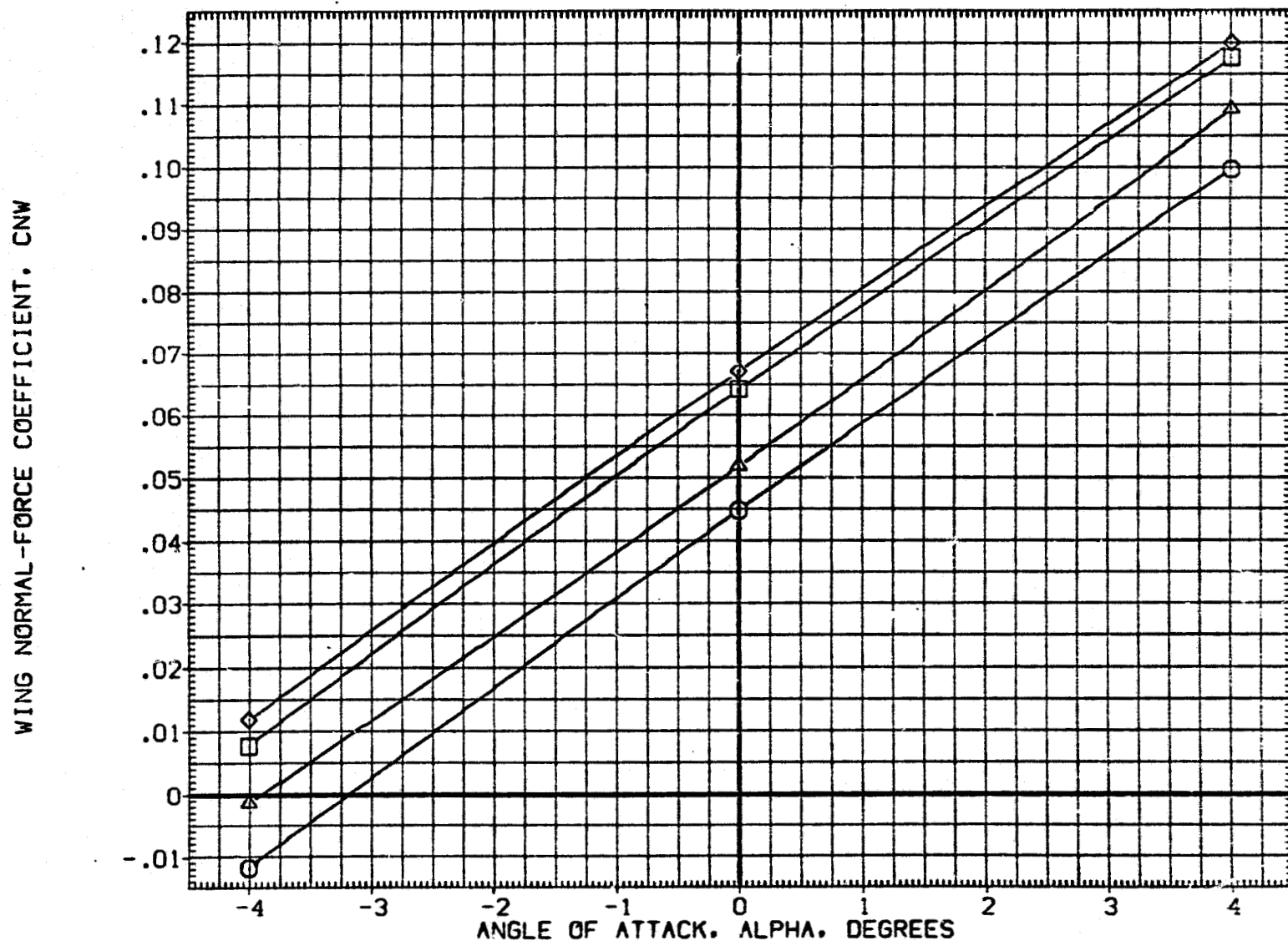


FIG. 6 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4XA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X7)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

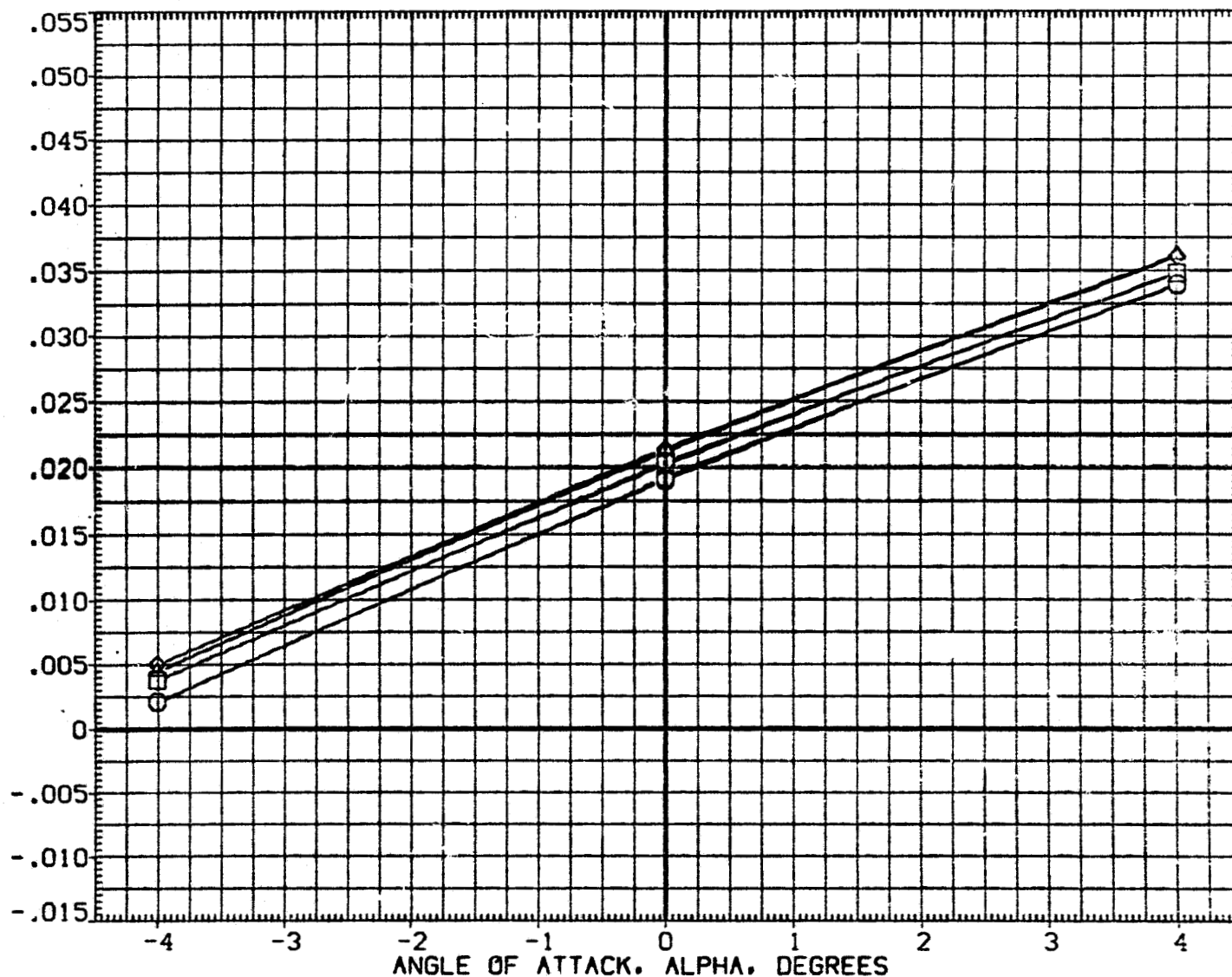


FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50. FT.
(RE4XA3) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X93) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X77) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

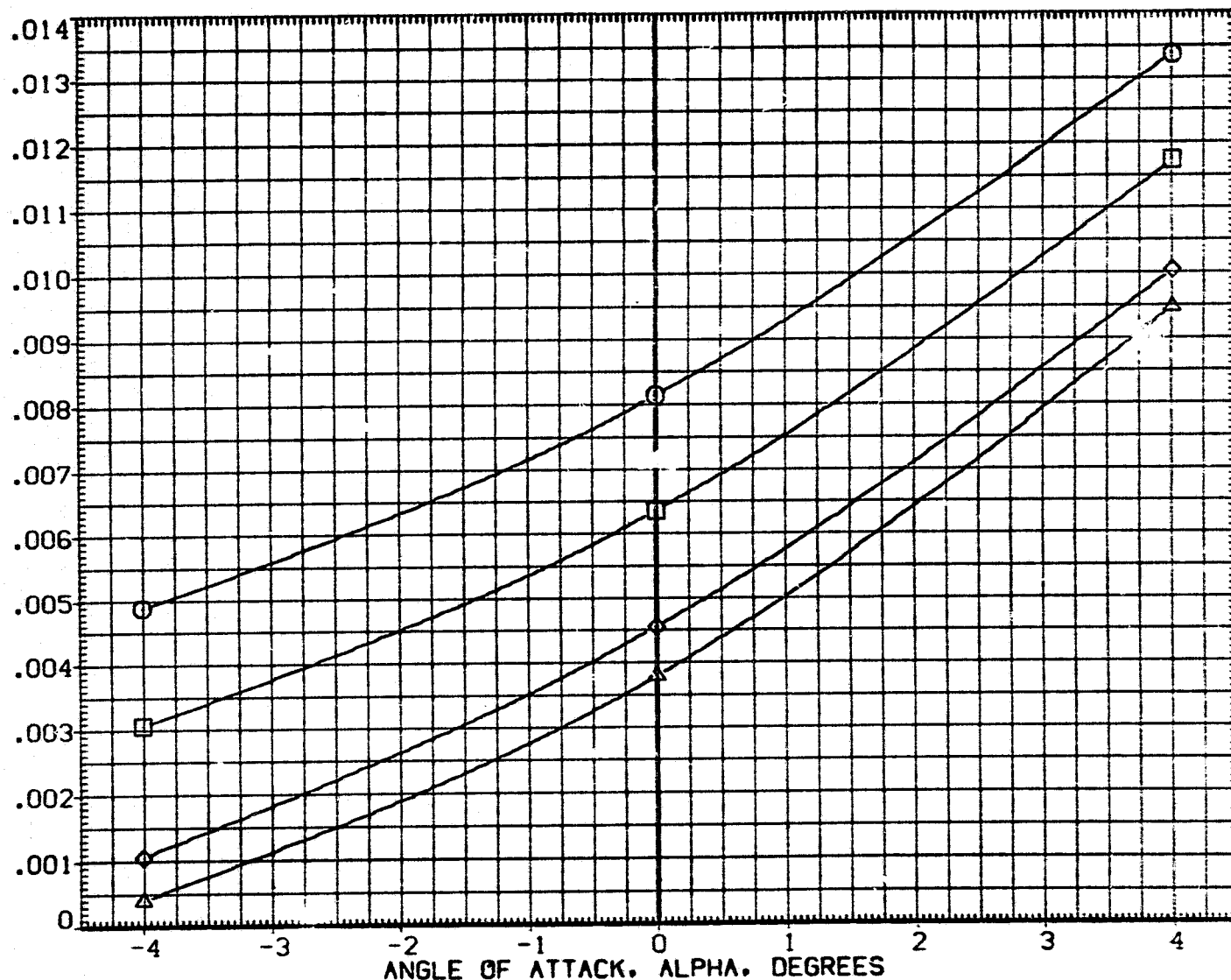


FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4XA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X77)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
.000	4.000	1.250	4.250	LREF 1290.3000 IN.
4.000	4.000	1.250	4.250	BREF 1290.3000 IN.
8.000	.000	1.250	4.250	XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

WING NORMAL-FORCE COEFFICIENT, CNW

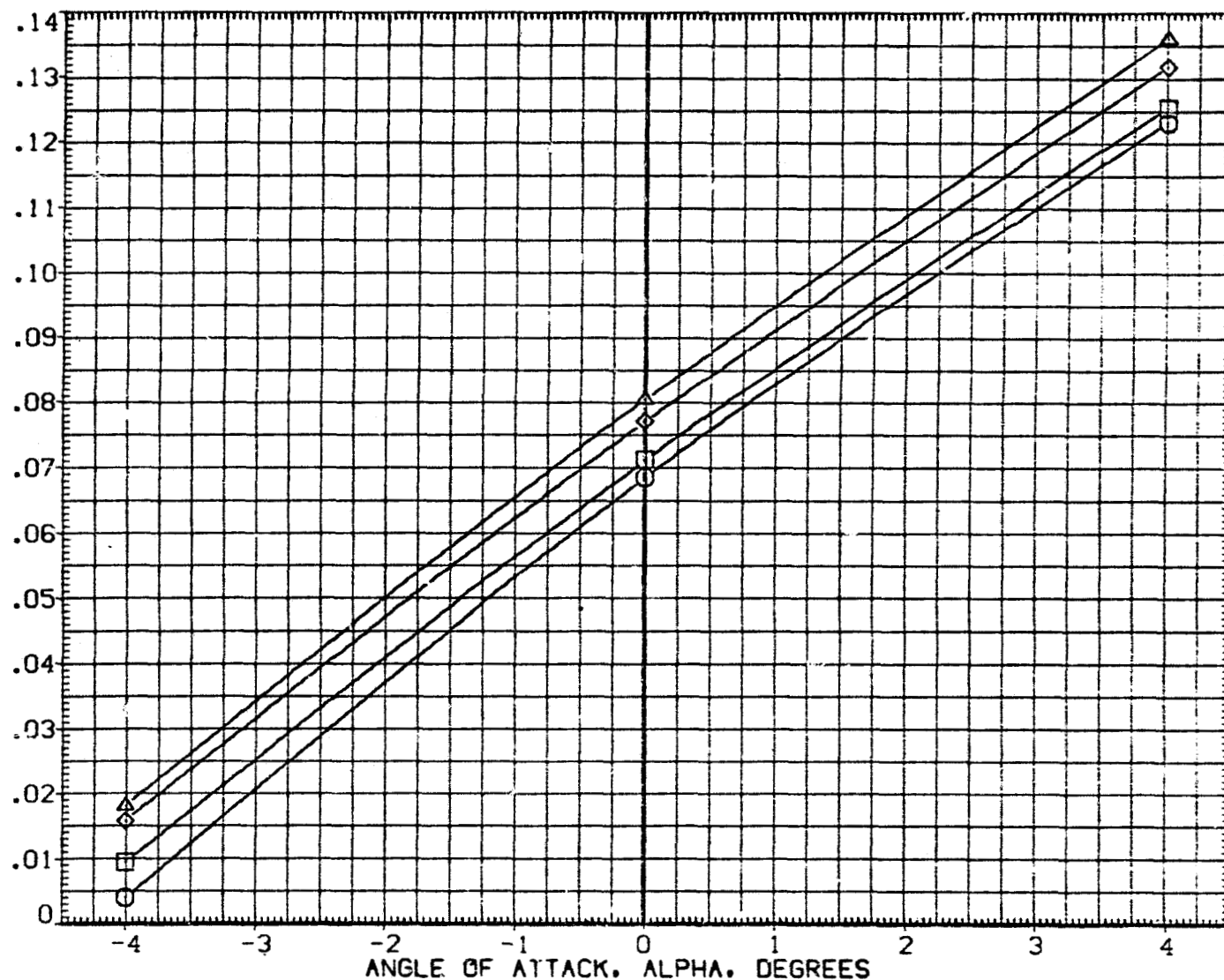


FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X56) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-18	ELV-08	MACH	RN/L
.000	.000	1.250	4.250
8.000	4.000	1.250	4.250

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

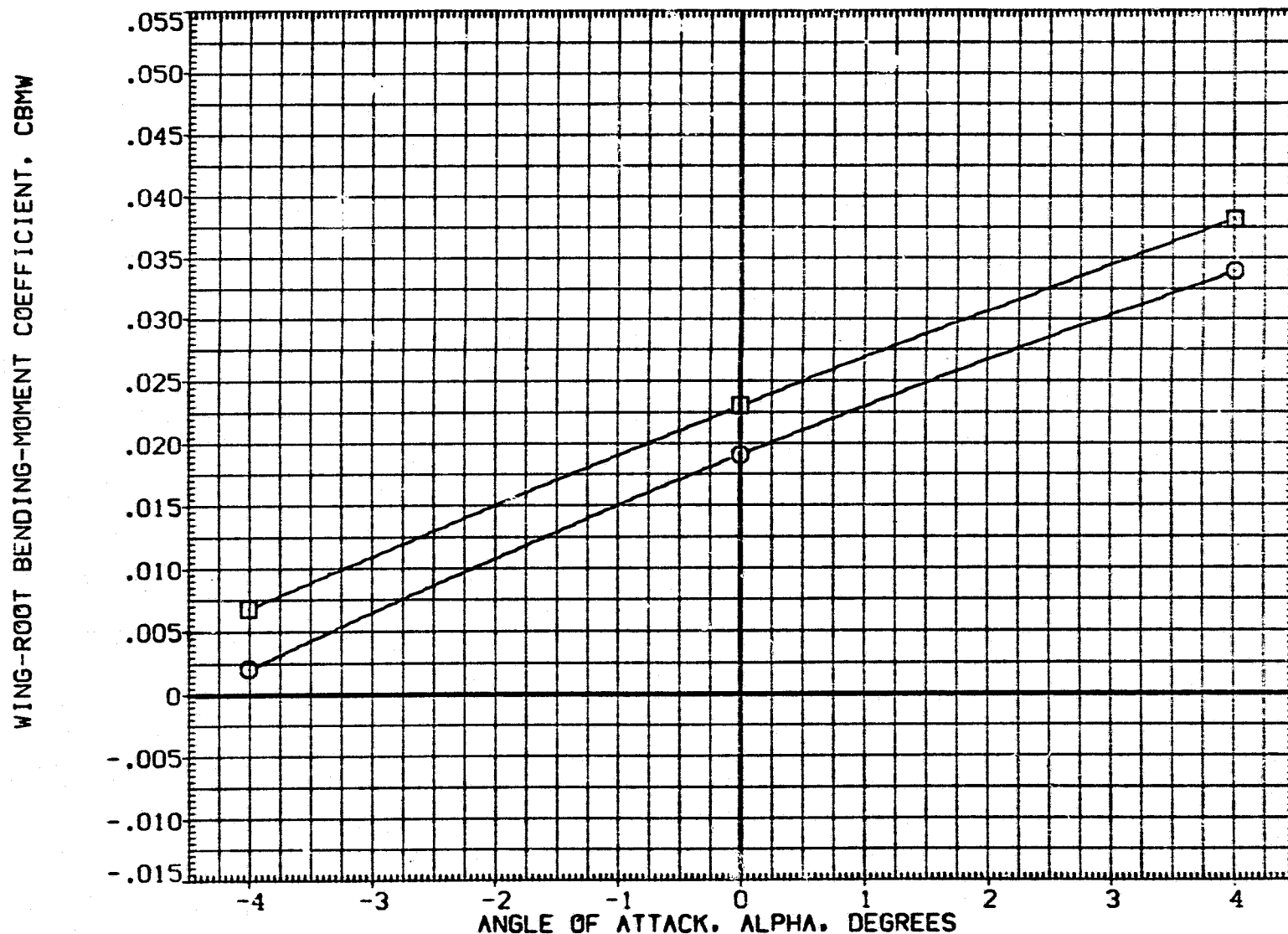


FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X56)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
				BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

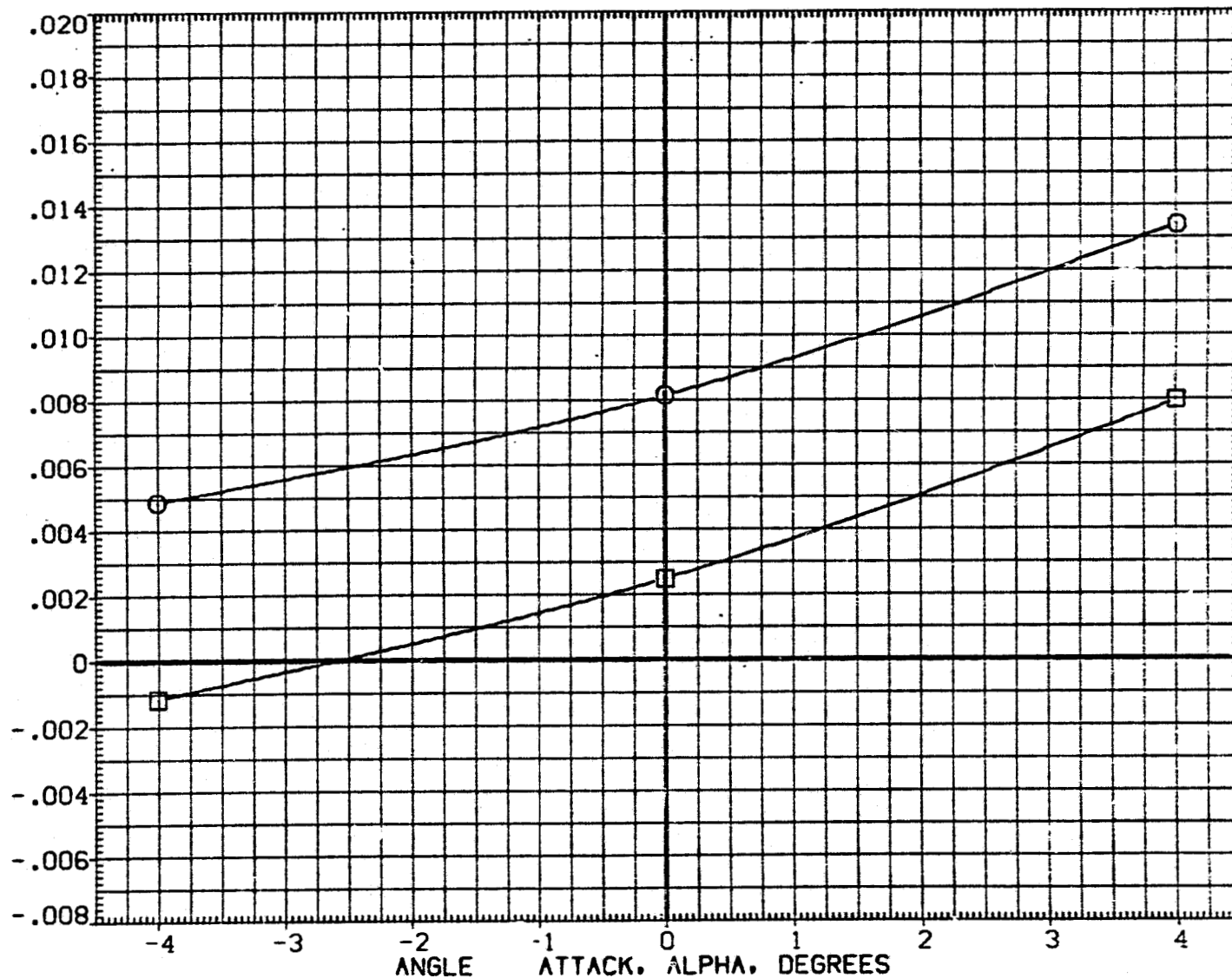


FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RE4X31) ☐ ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
 (RE4X56) ☐ ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
				BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0500 IN.
				SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

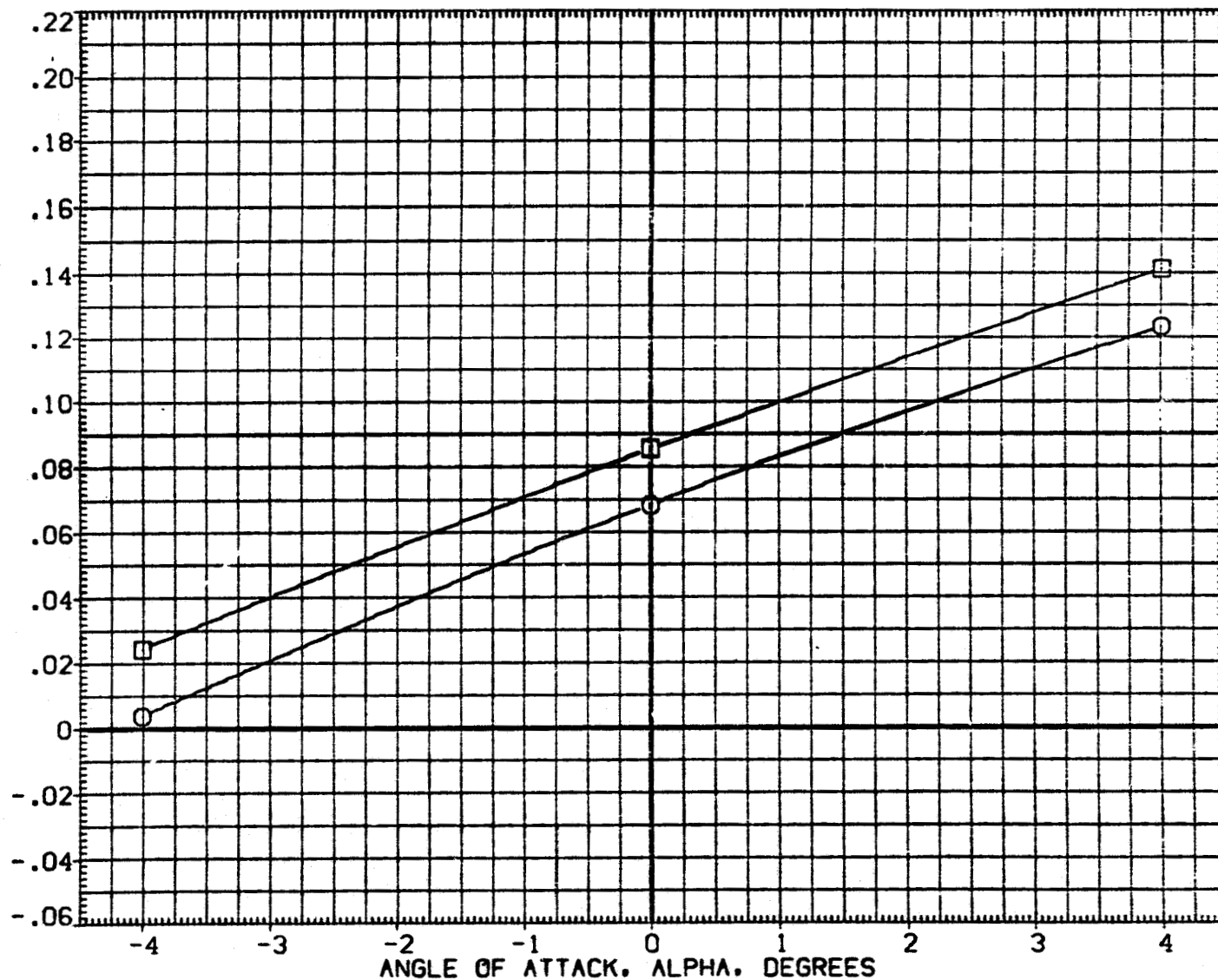


FIG. 7 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4XA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4X78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

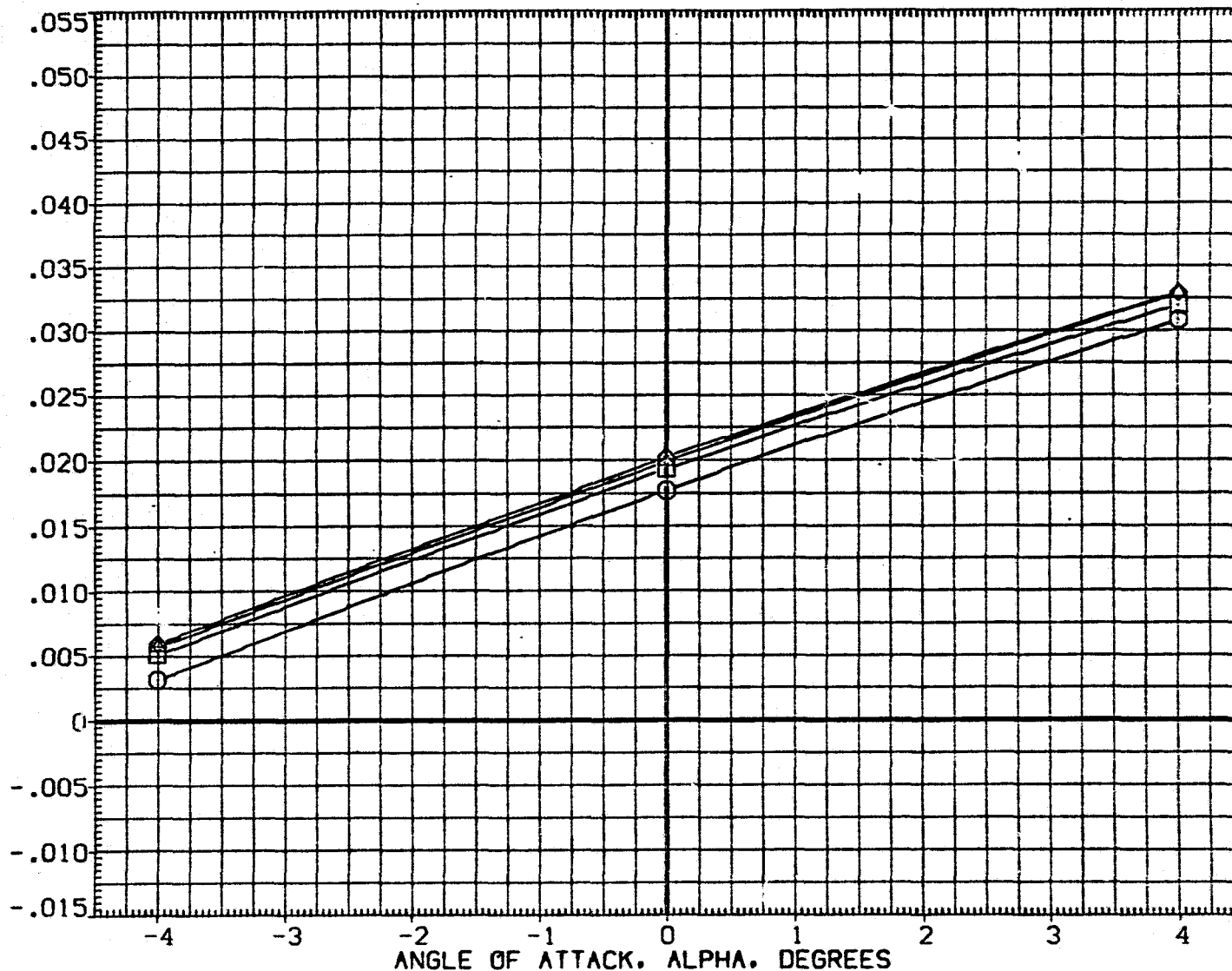


FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4XA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

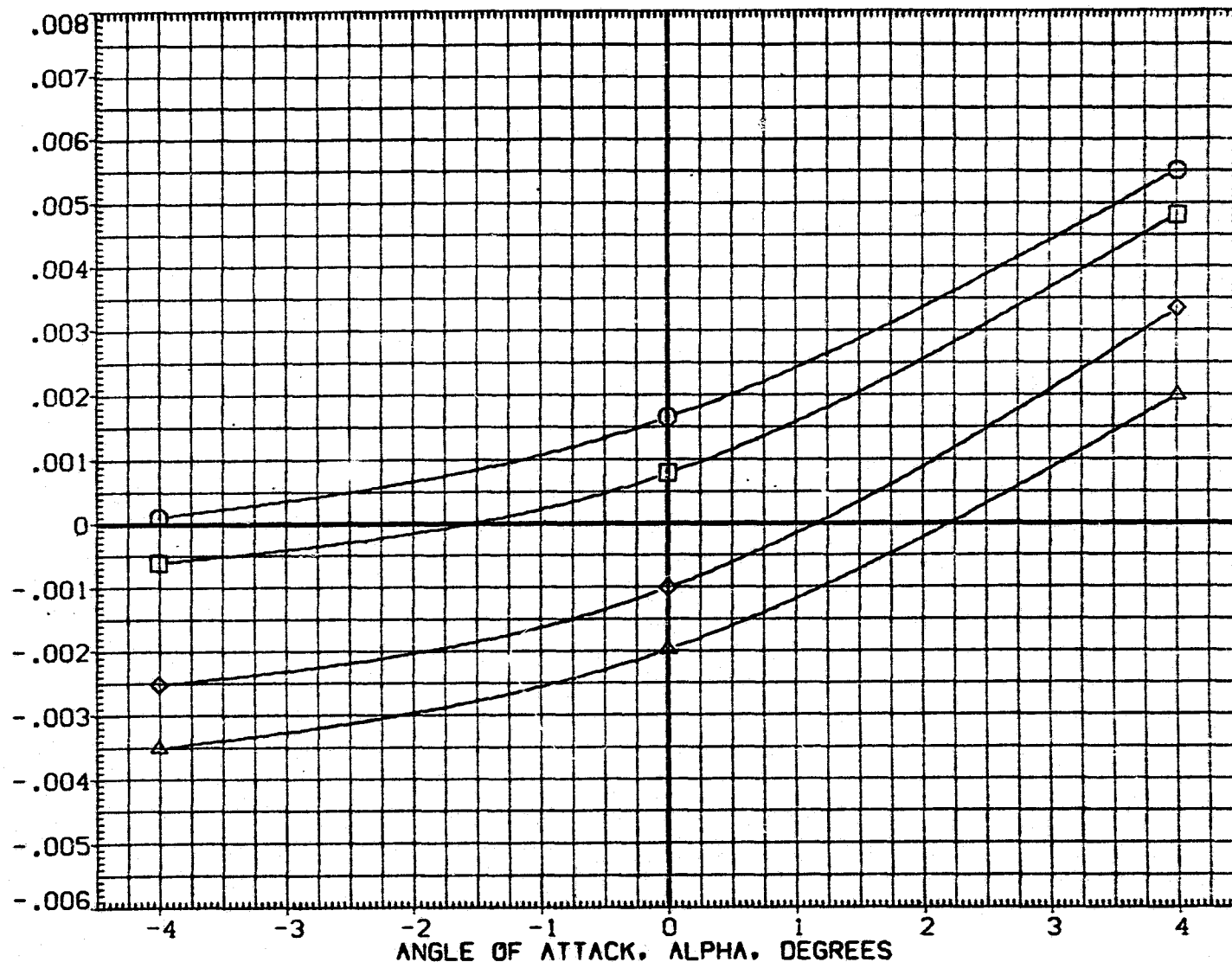


FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2650.0000	SQ.FT.
(RE4XA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

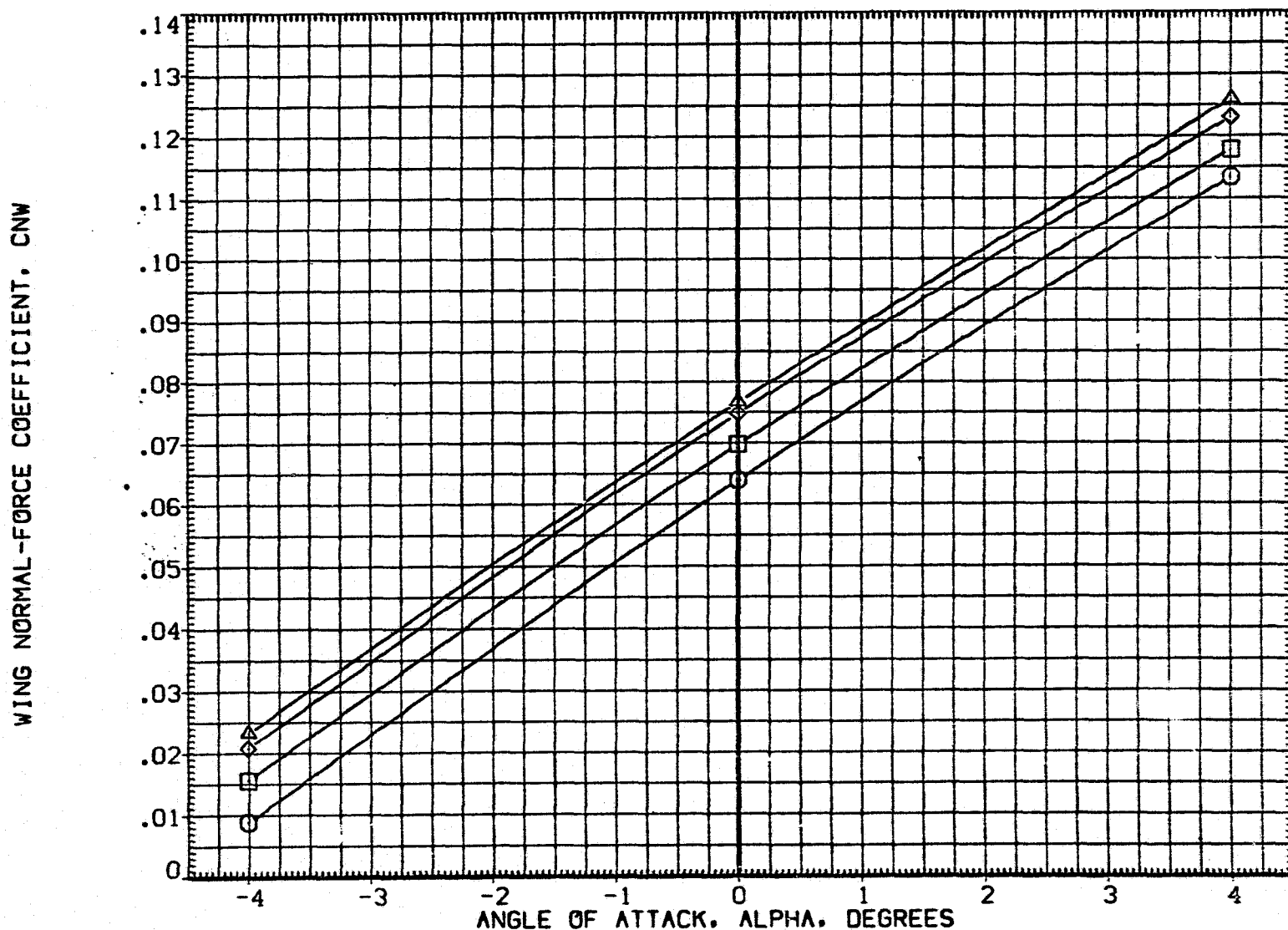


FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4X57)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X68)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

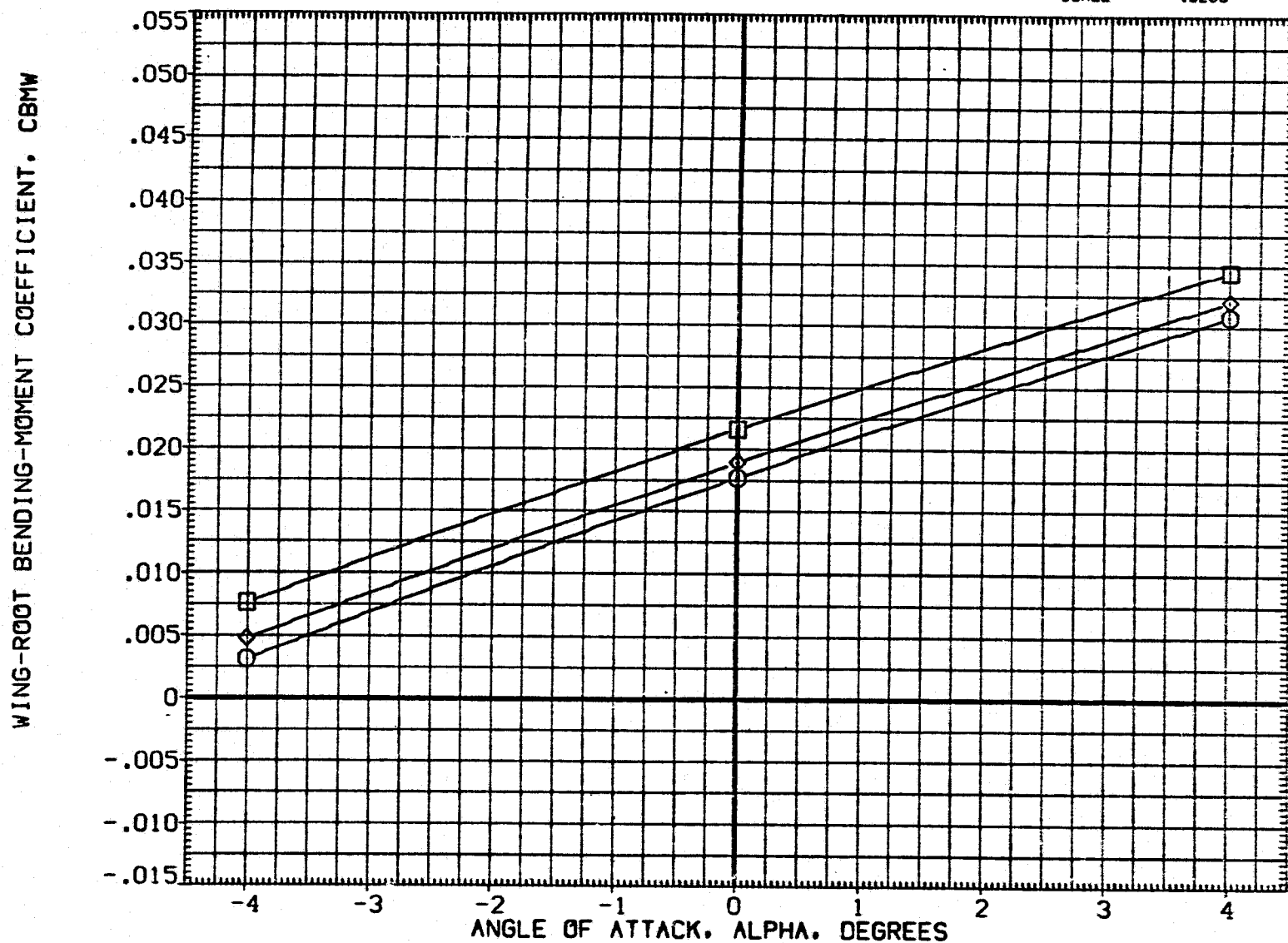


FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SO.FT.
(RE4X57)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X68)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

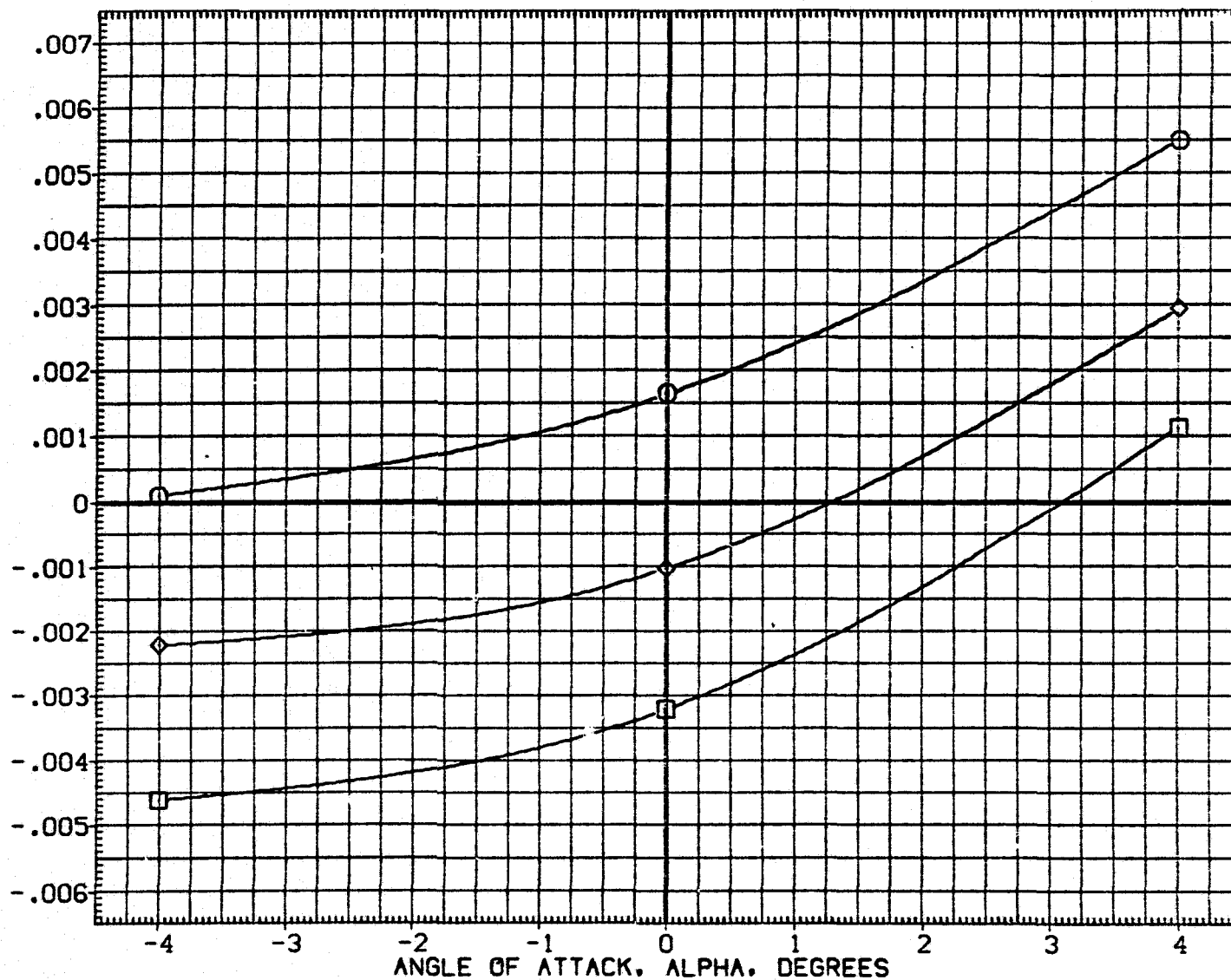


FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X32) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X57) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X68) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

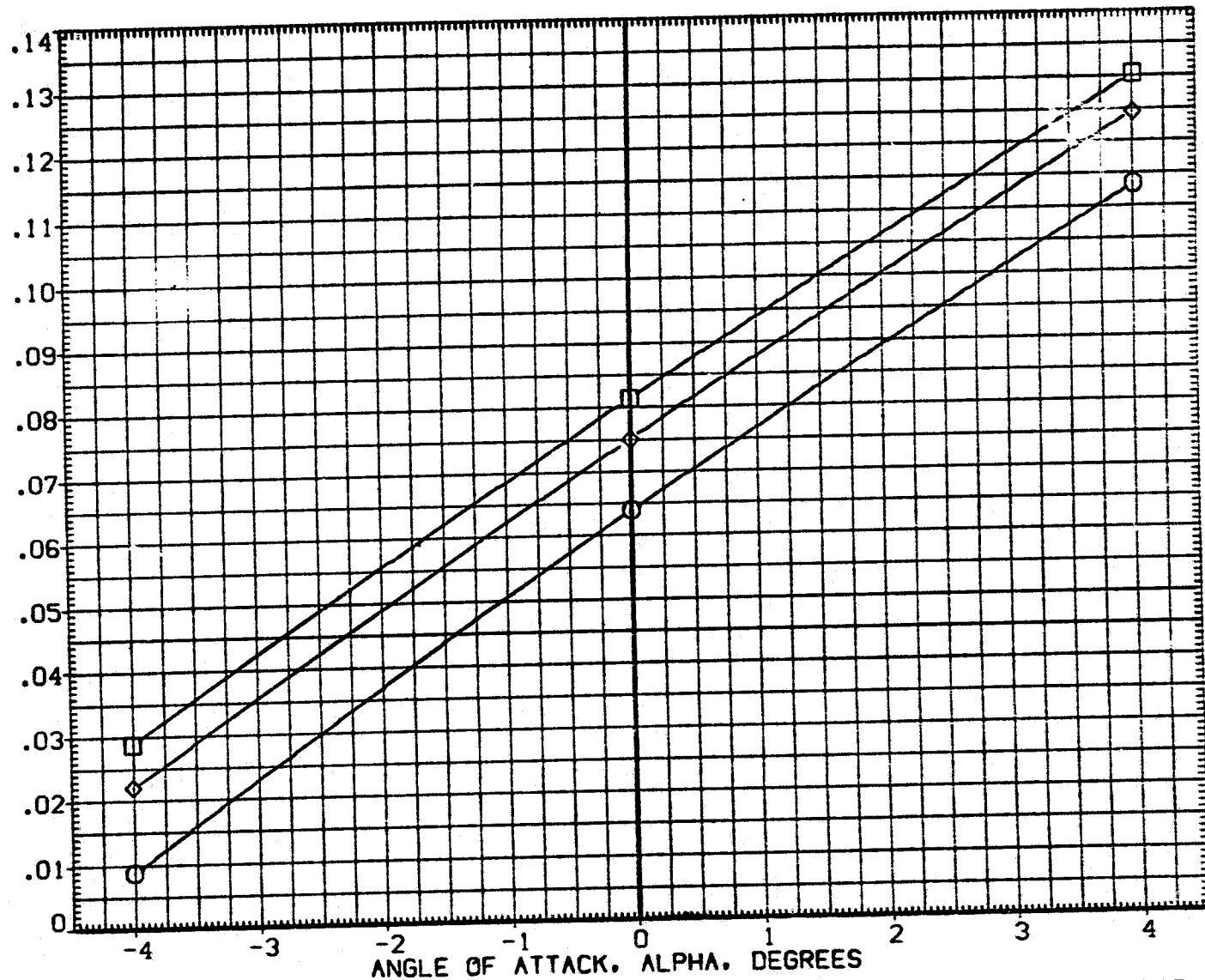


FIG. 8 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREC	2690.0000	50.FT.
(RE4XA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4X90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

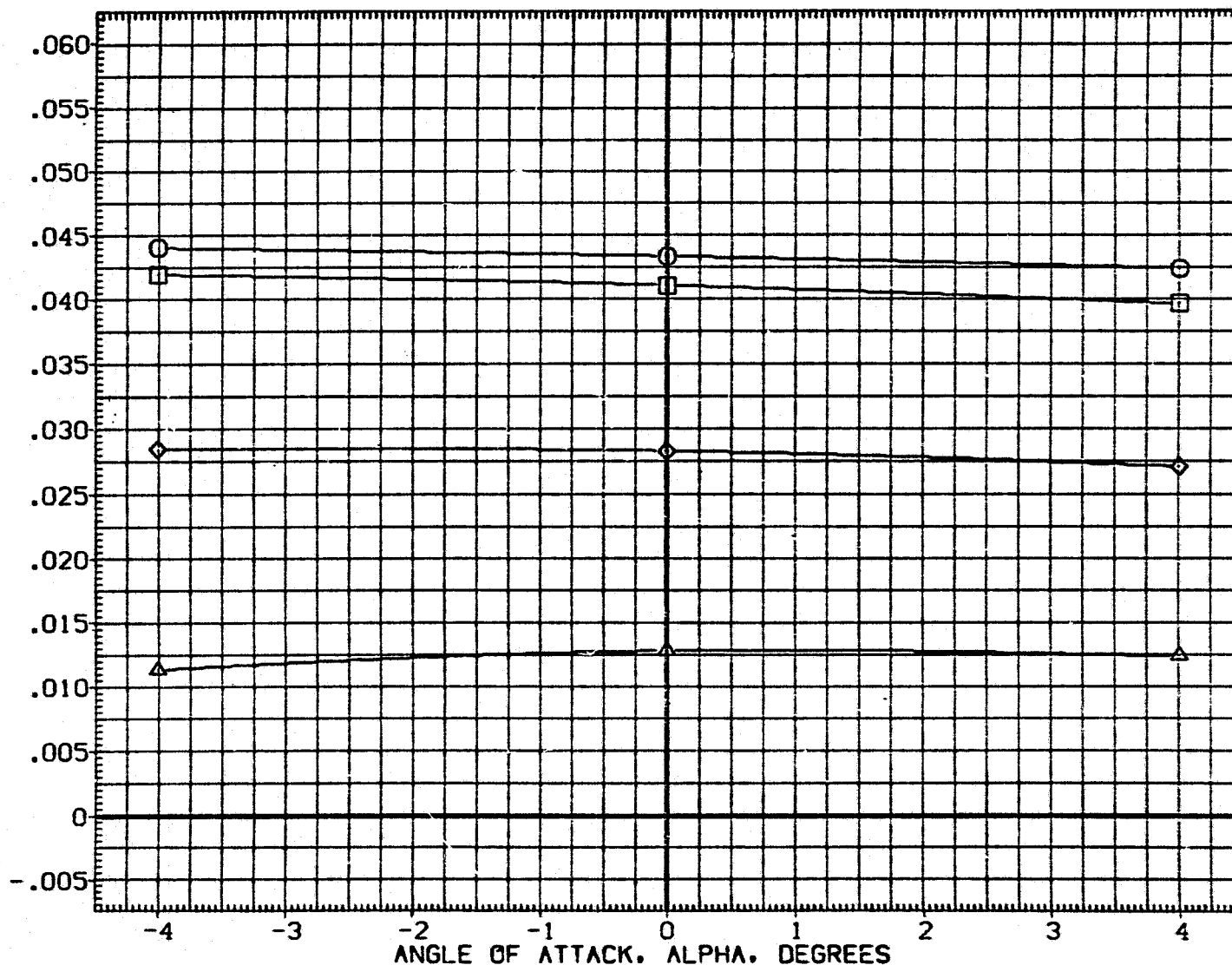


FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4XA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4X90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

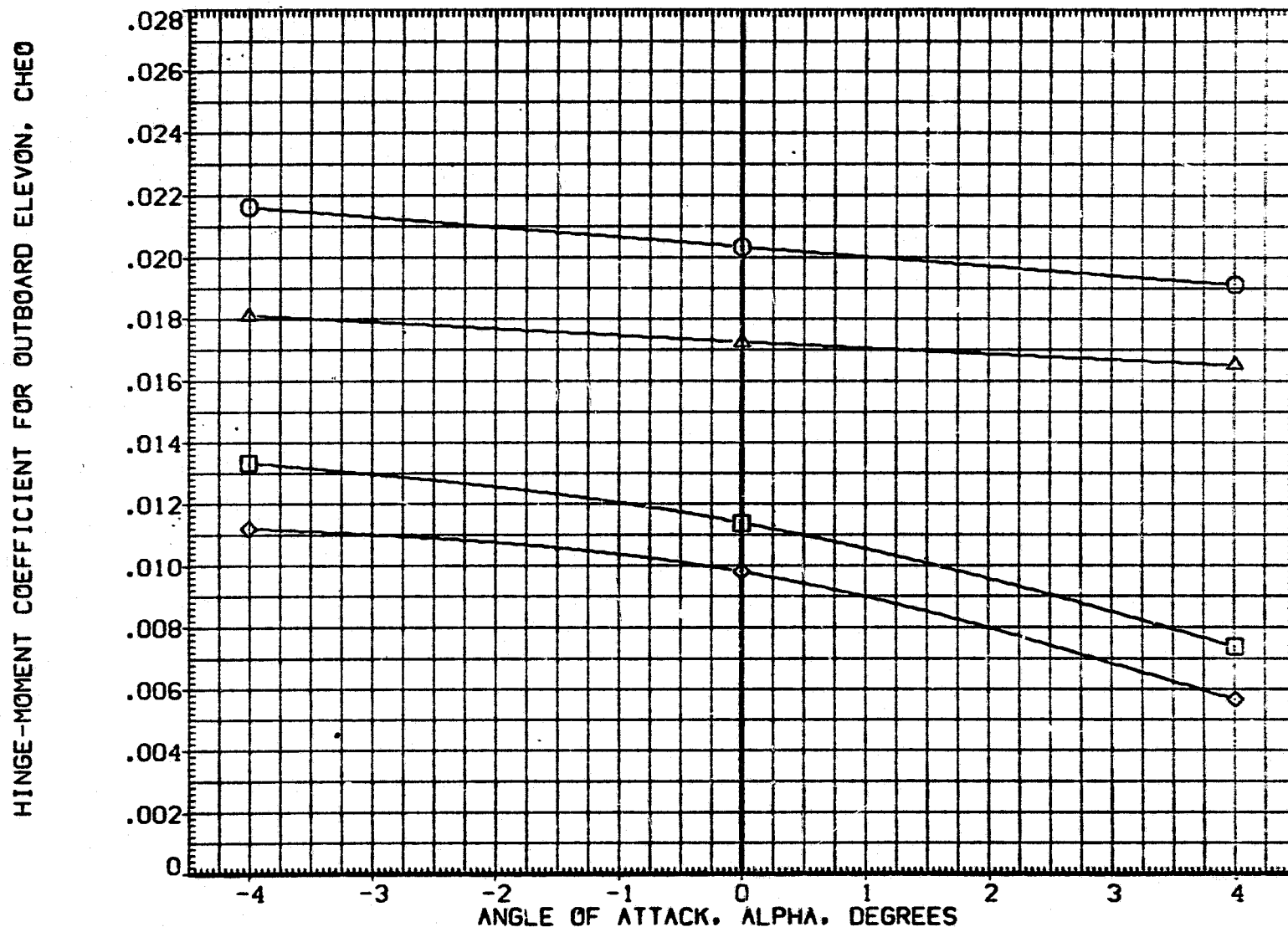


FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, $M=0.6$ PLUMEOFF
 (A) $\beta = .00$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SC.FT.
(RE4X84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4X53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	6.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

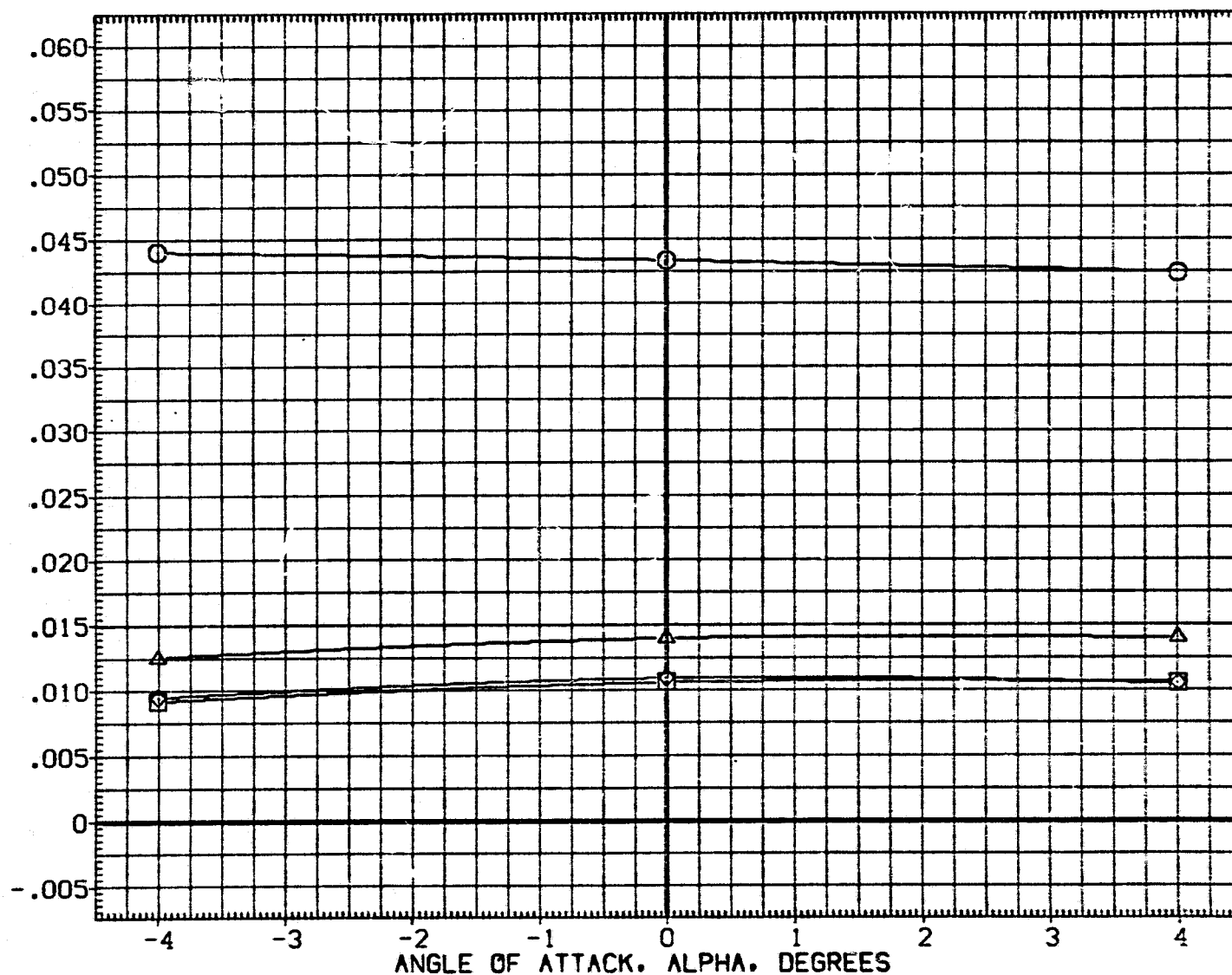


FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMECOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4X53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

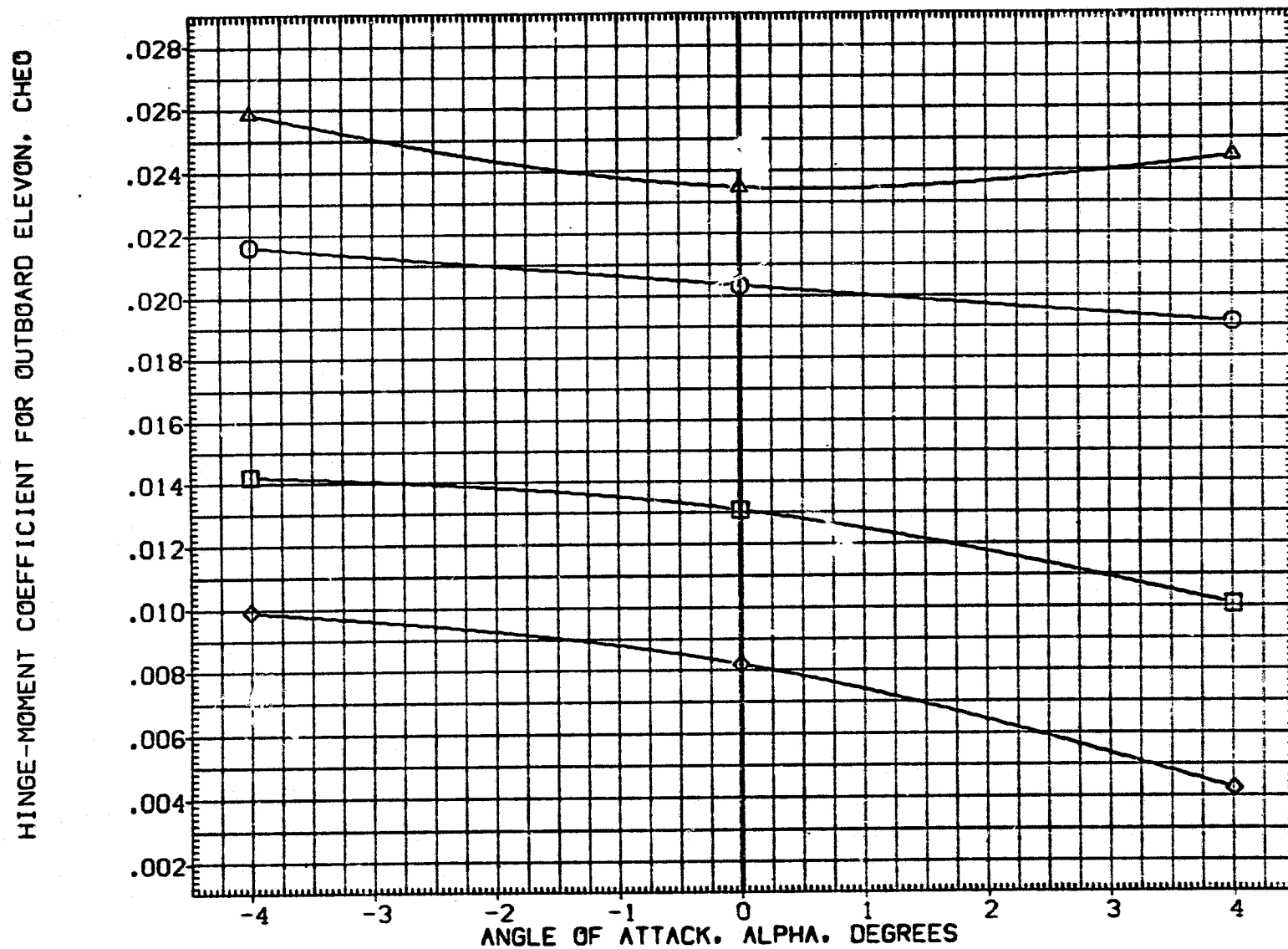


FIG. 9 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.6 PLUMEOFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29) \bigcirc	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4XA1) \square	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000 IN.
(RE4X91) \diamond	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X75) \triangle	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

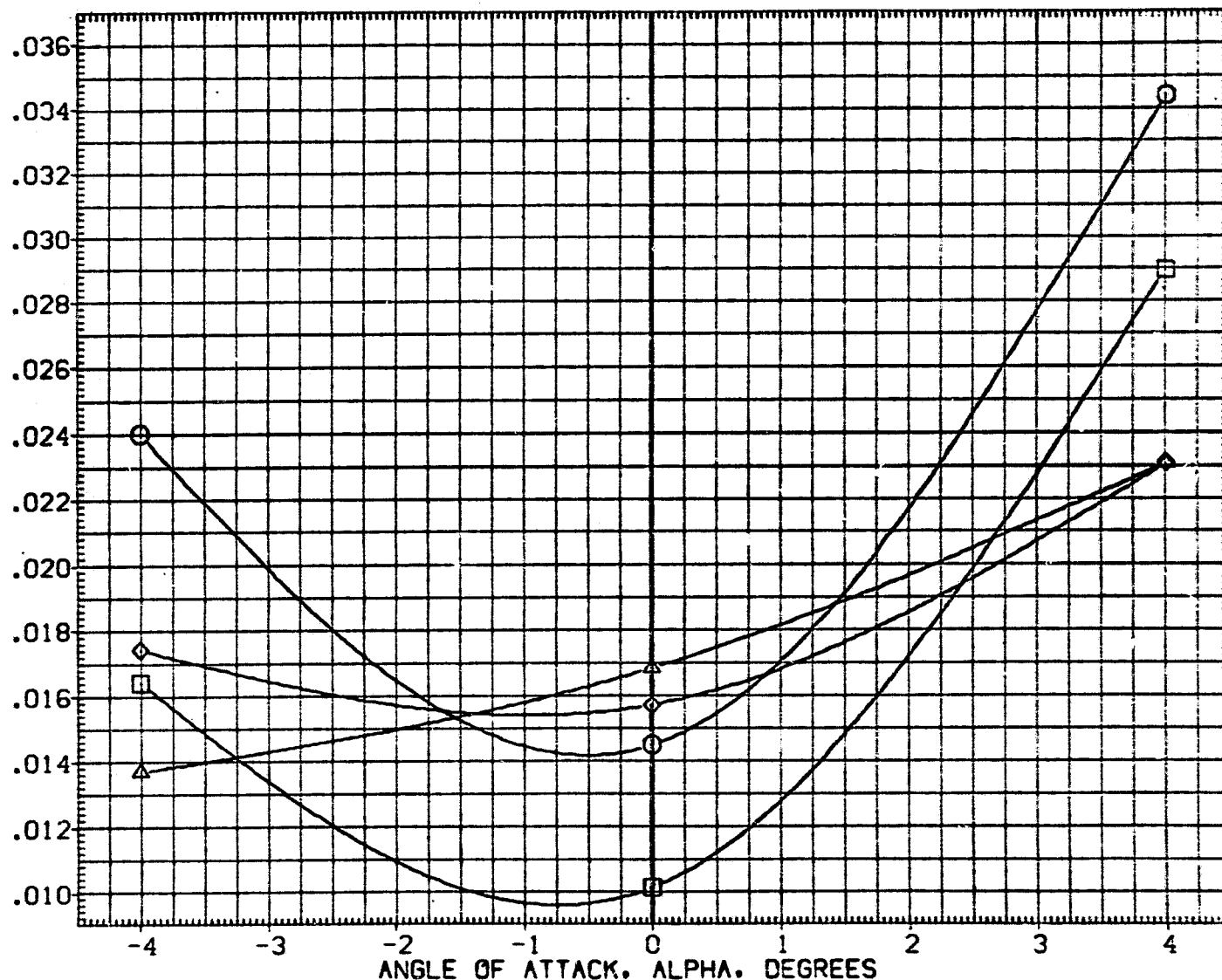


FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.9 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ. FT.
(RE4XA1) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000 IN.
(RE4X91) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X75) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

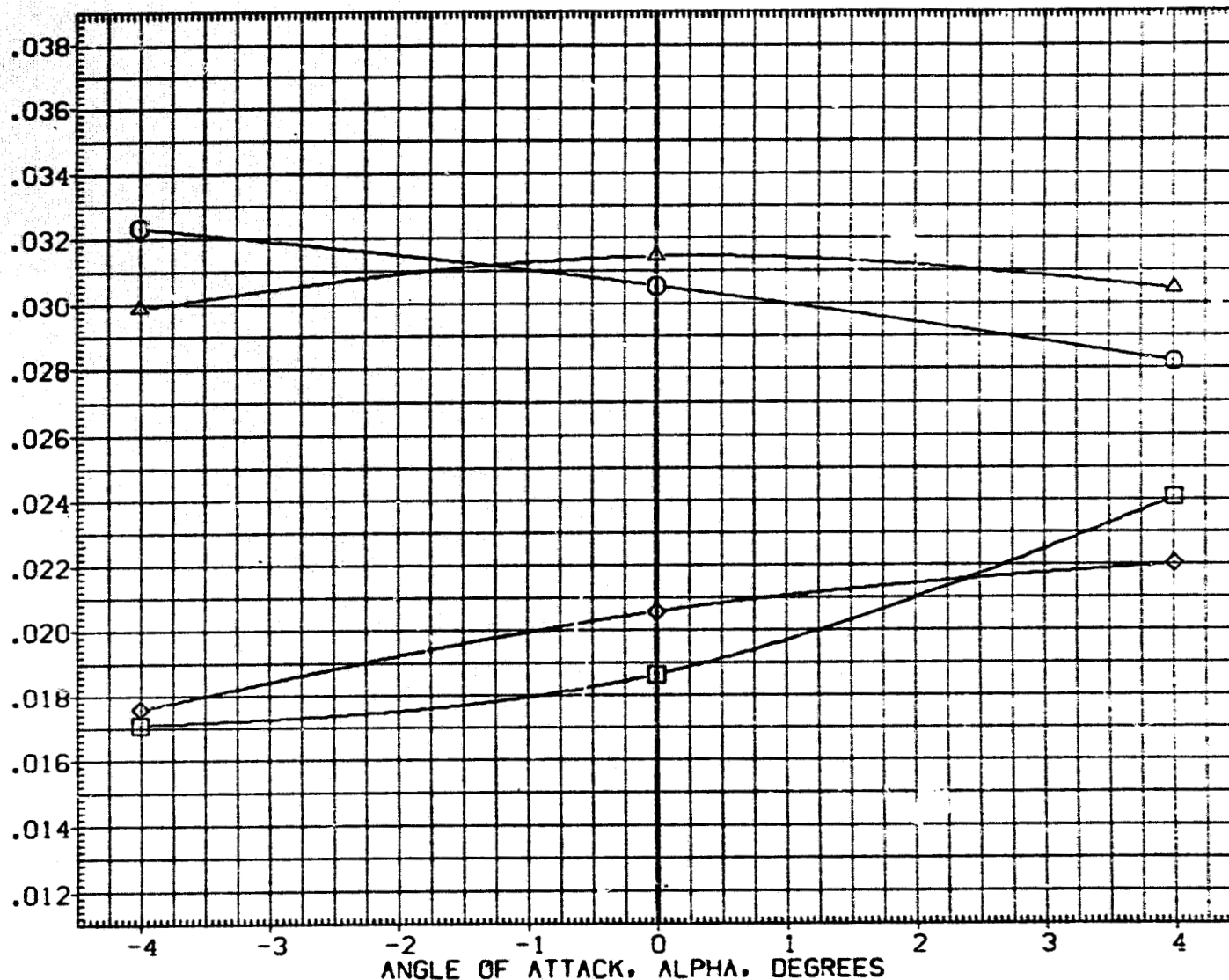


FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.9 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1230.3000	IN.
(RE4X54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

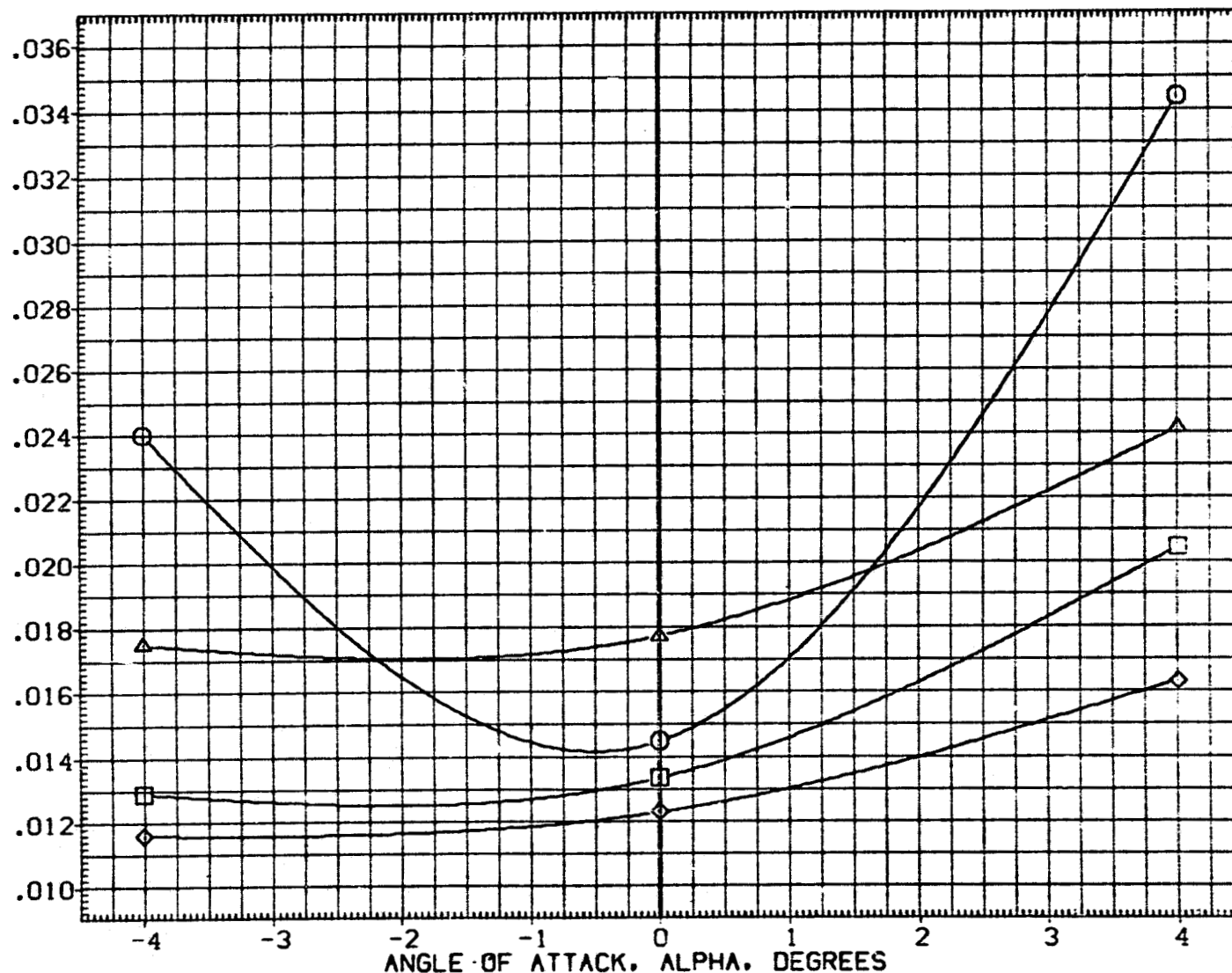


FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, $M=0.9$ PLUMEOFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4X54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMPP	.0000	IN.
						YMPP	.0000	IN.
						ZMPP	.0000	IN.
						SCALE	.0200	

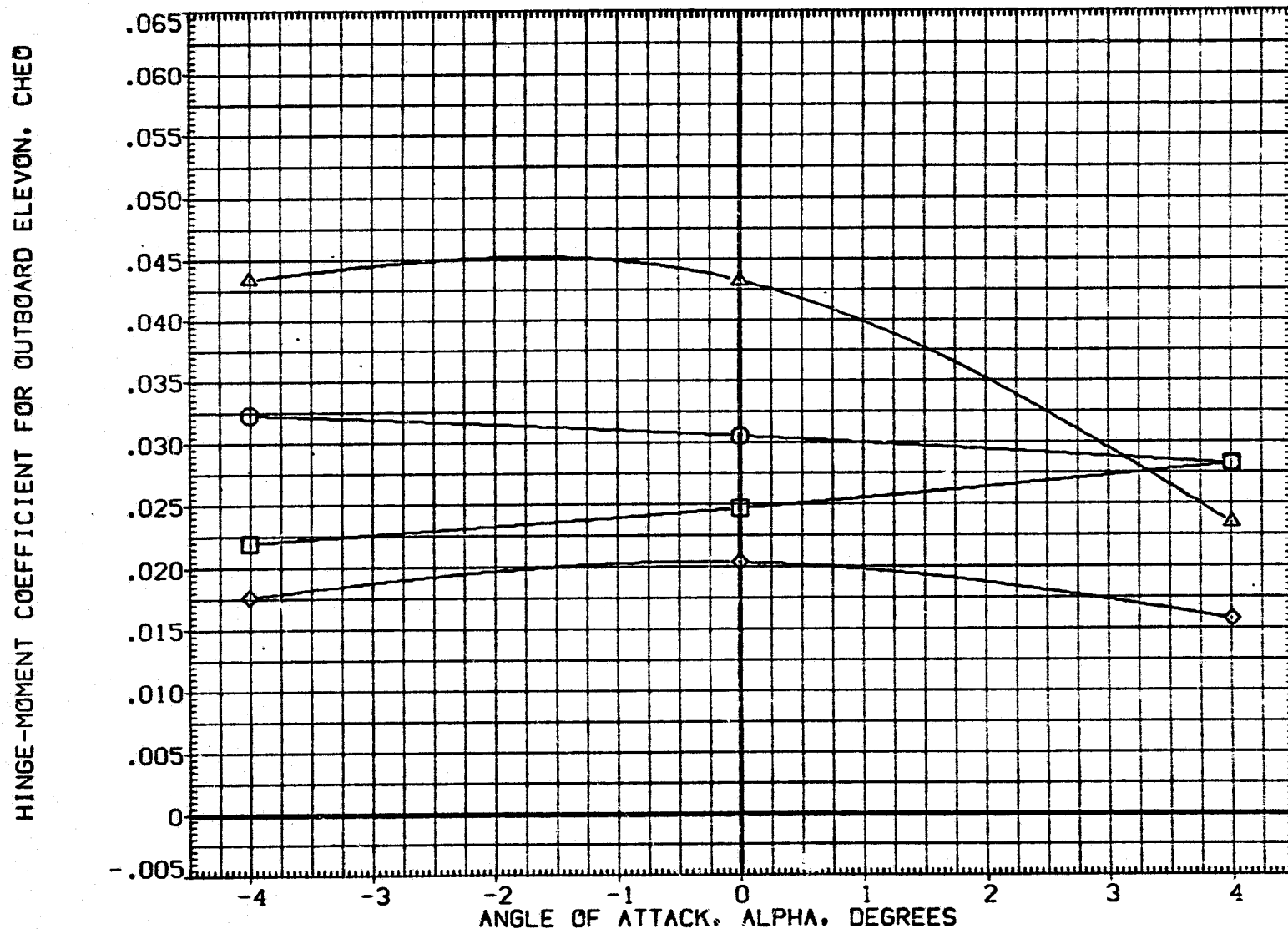


FIG. 10 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=0.9 PLUMEOFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4XA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

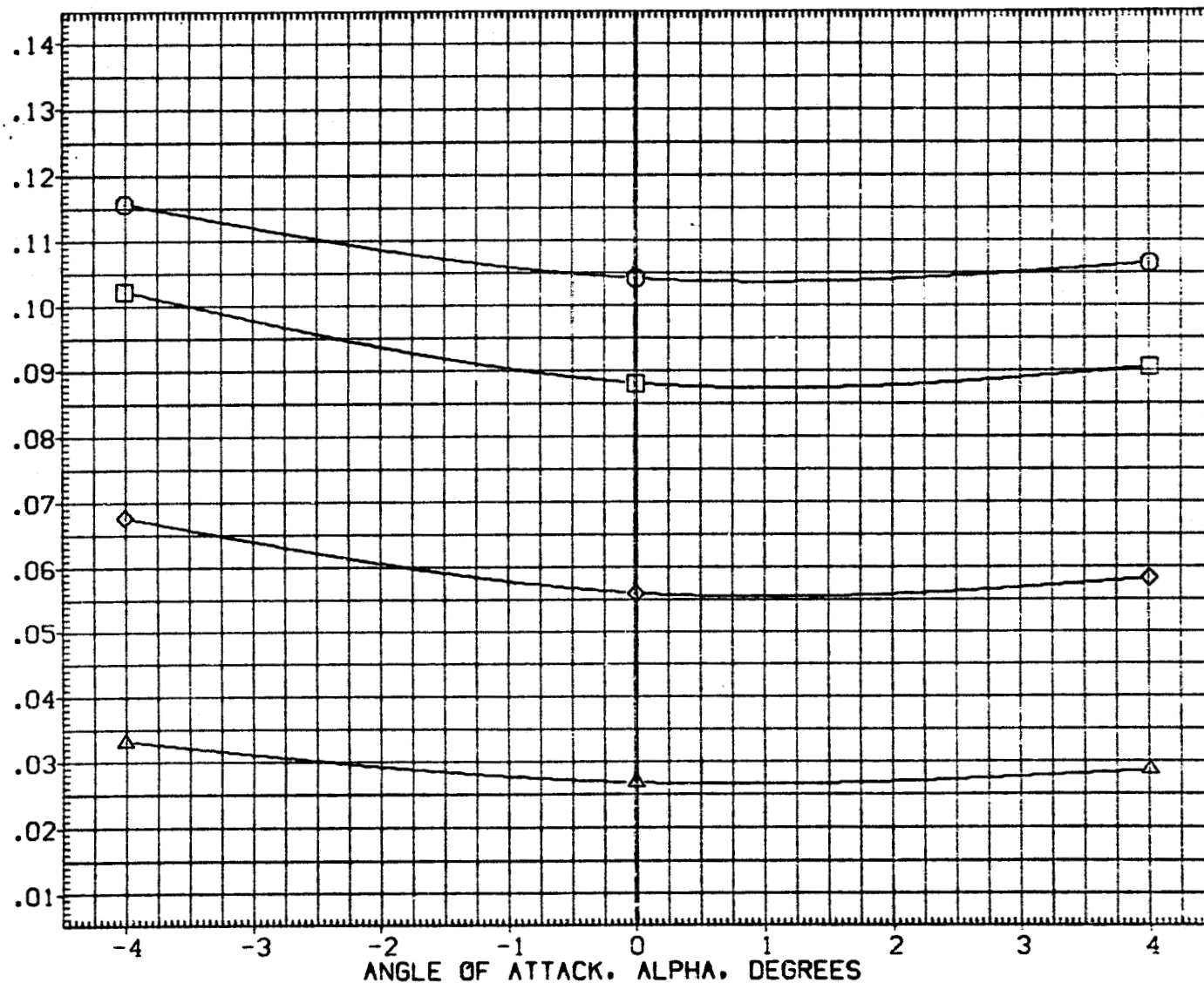


FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUMEOFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4XA2) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X92) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X76) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

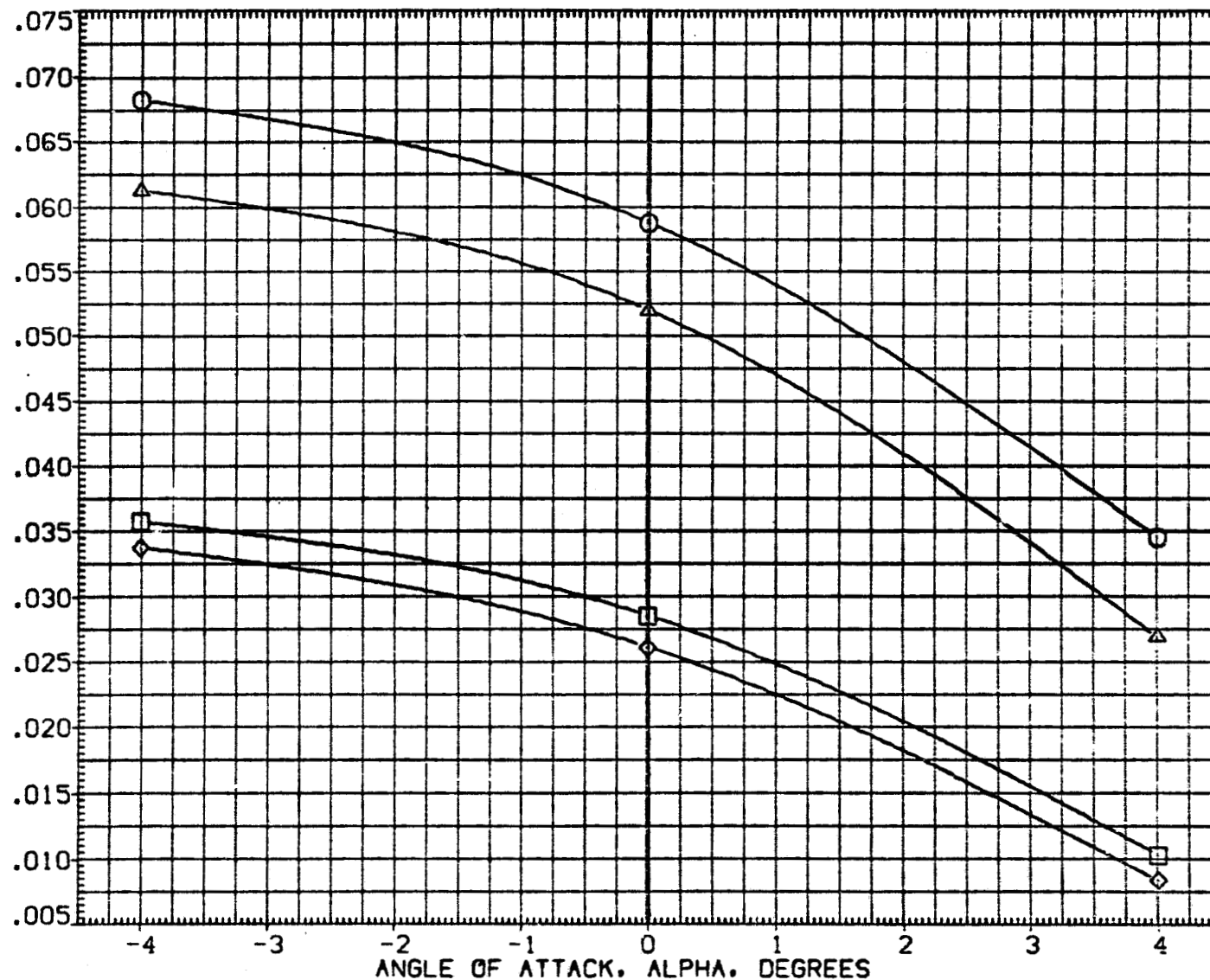


FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X86)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

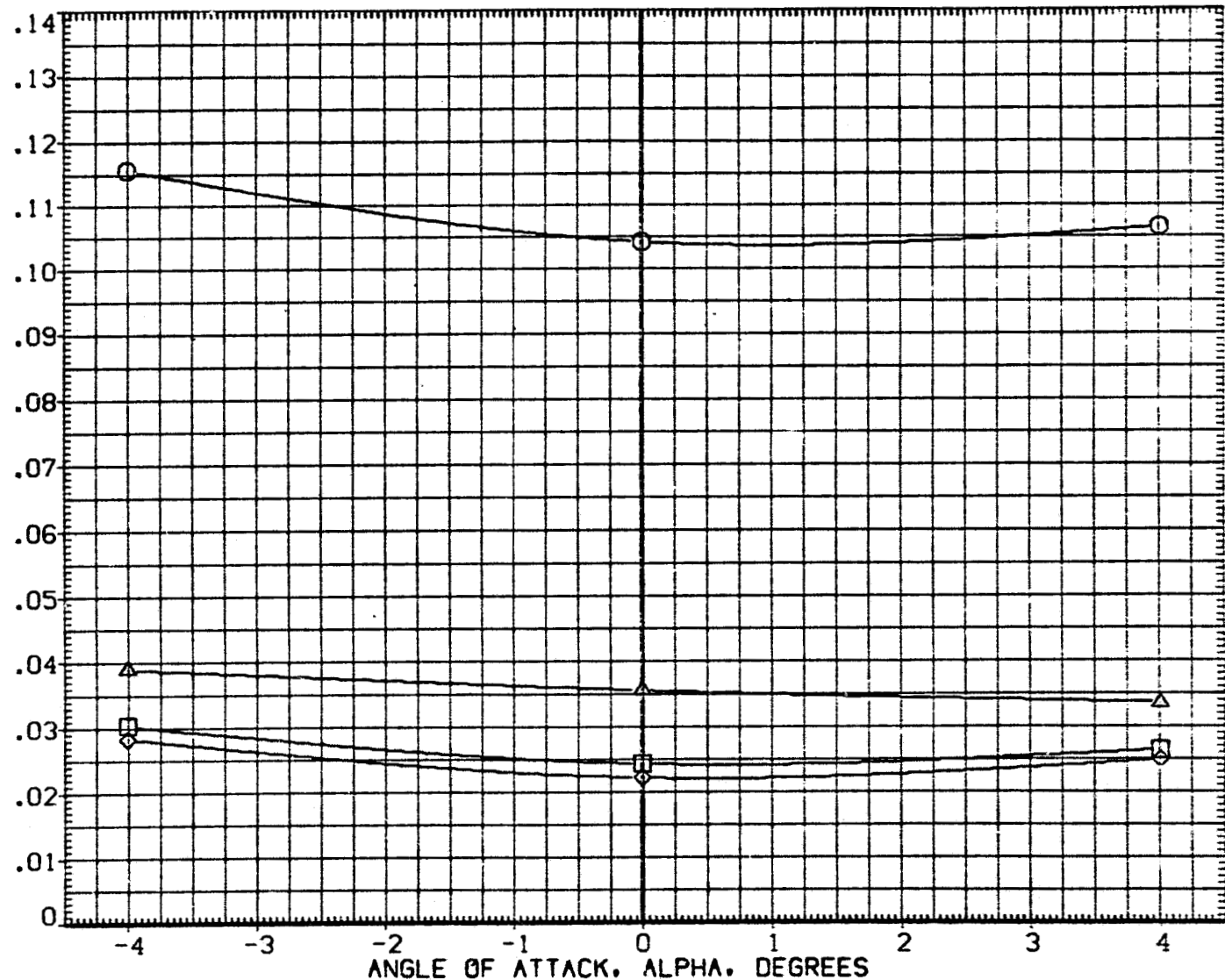


FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUMEOFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4X06)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	0.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

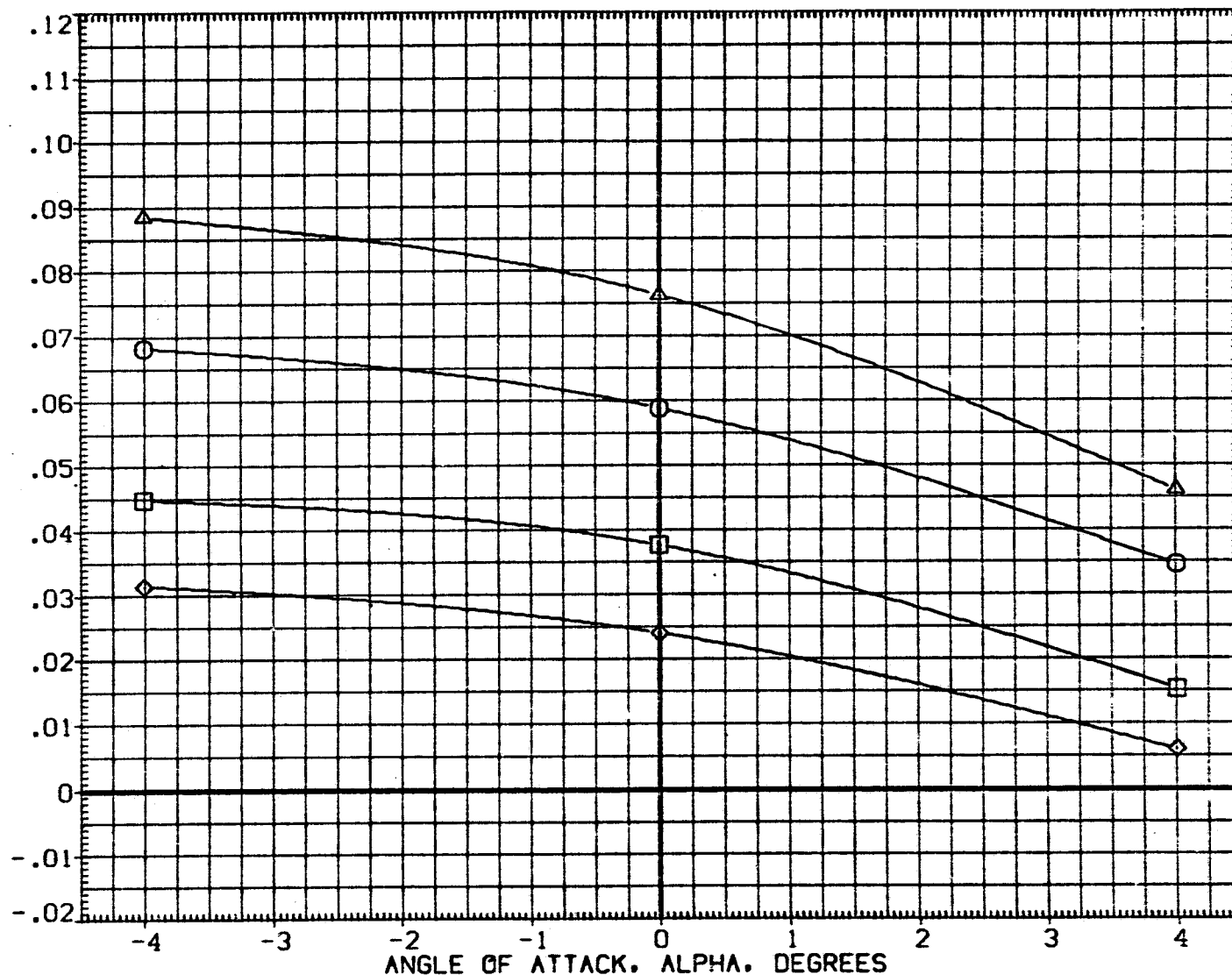


FIG. 11 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.1 PLUME OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4XA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4X77)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

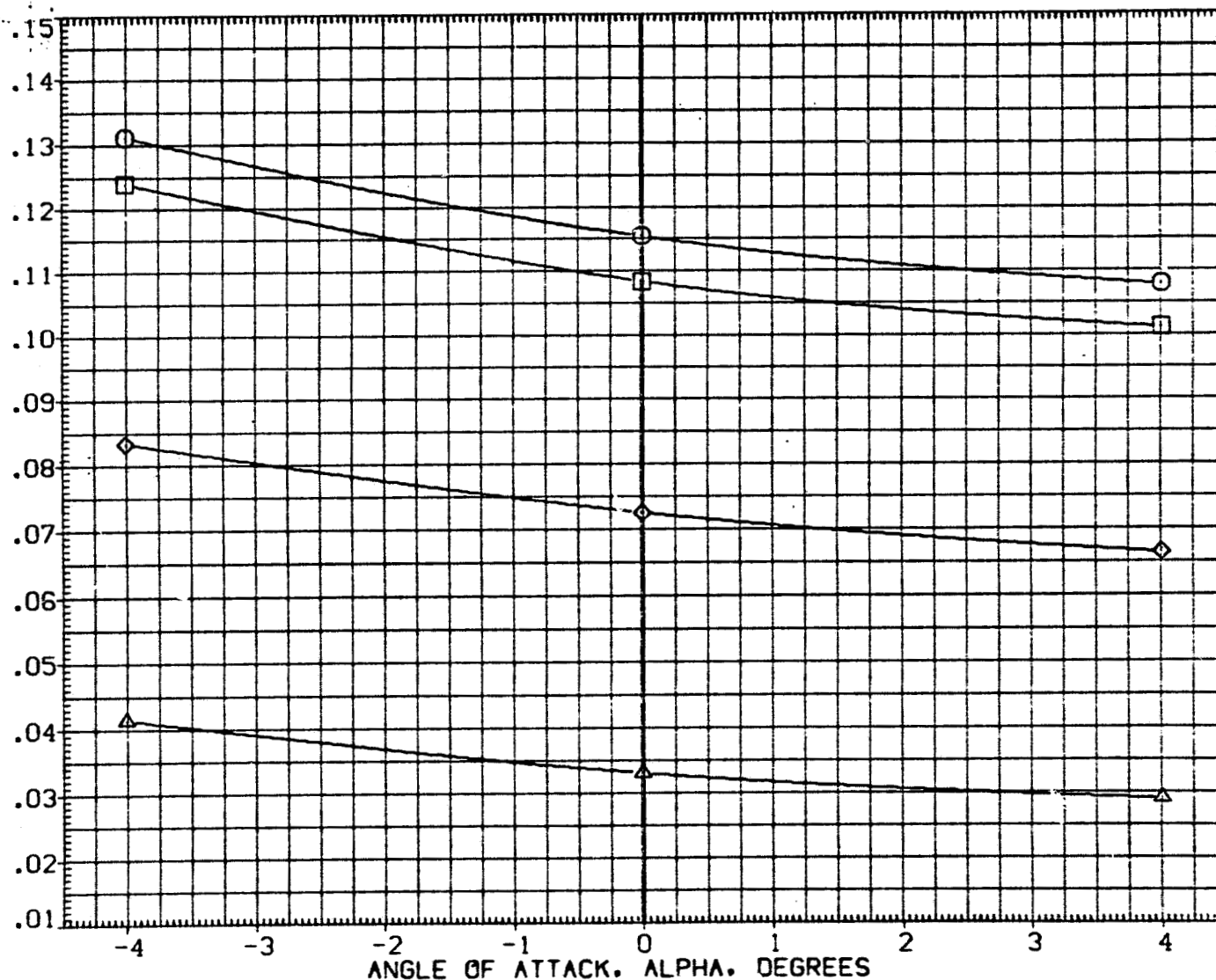






FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4XA3) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X93) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X77) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

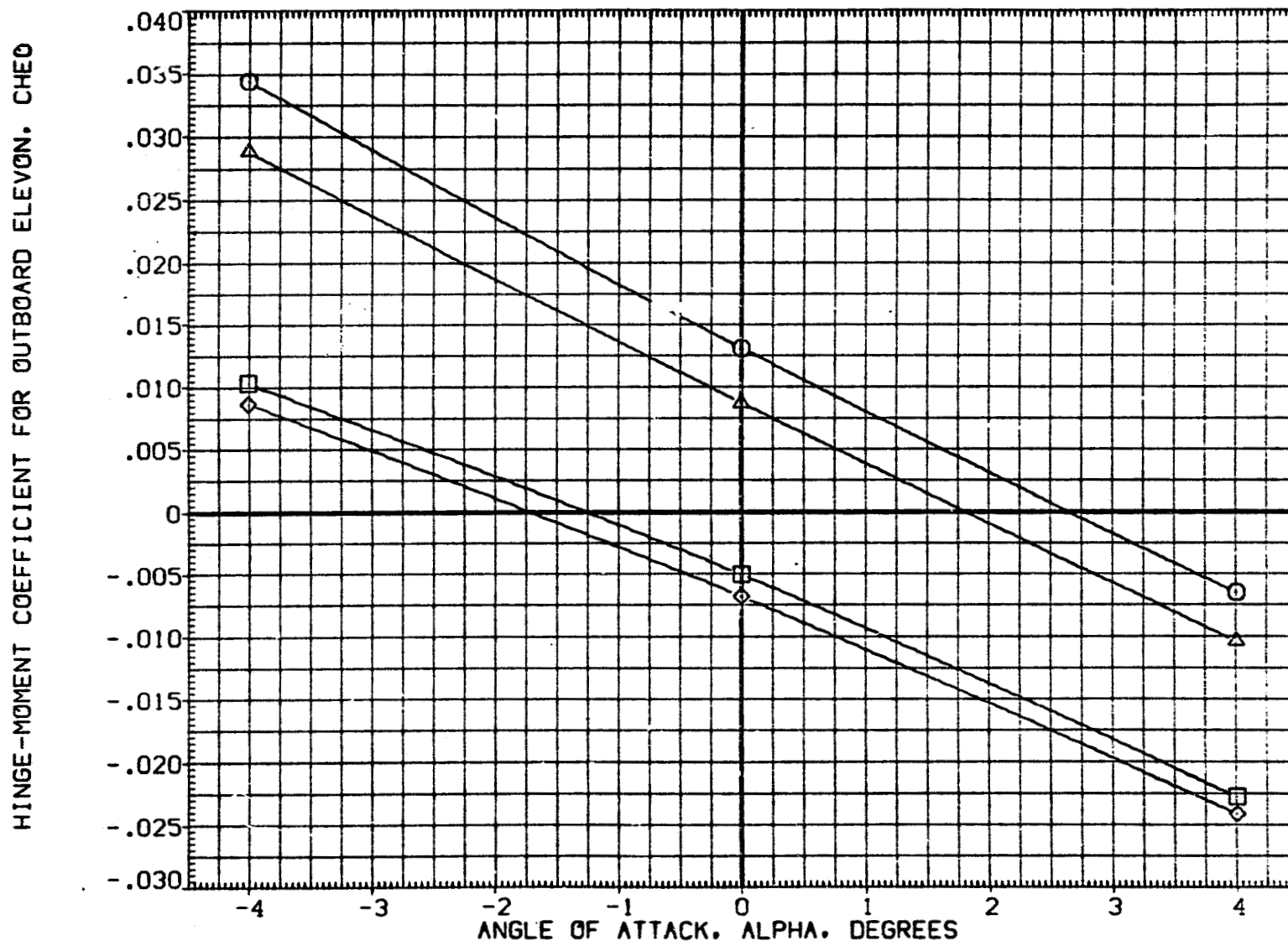


FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUMEOFF
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31) <input type="checkbox"/>	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X56) <input type="checkbox"/>	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
8.000	4.000	1.250	4.250	LREF 1290.3000 IN.
				BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

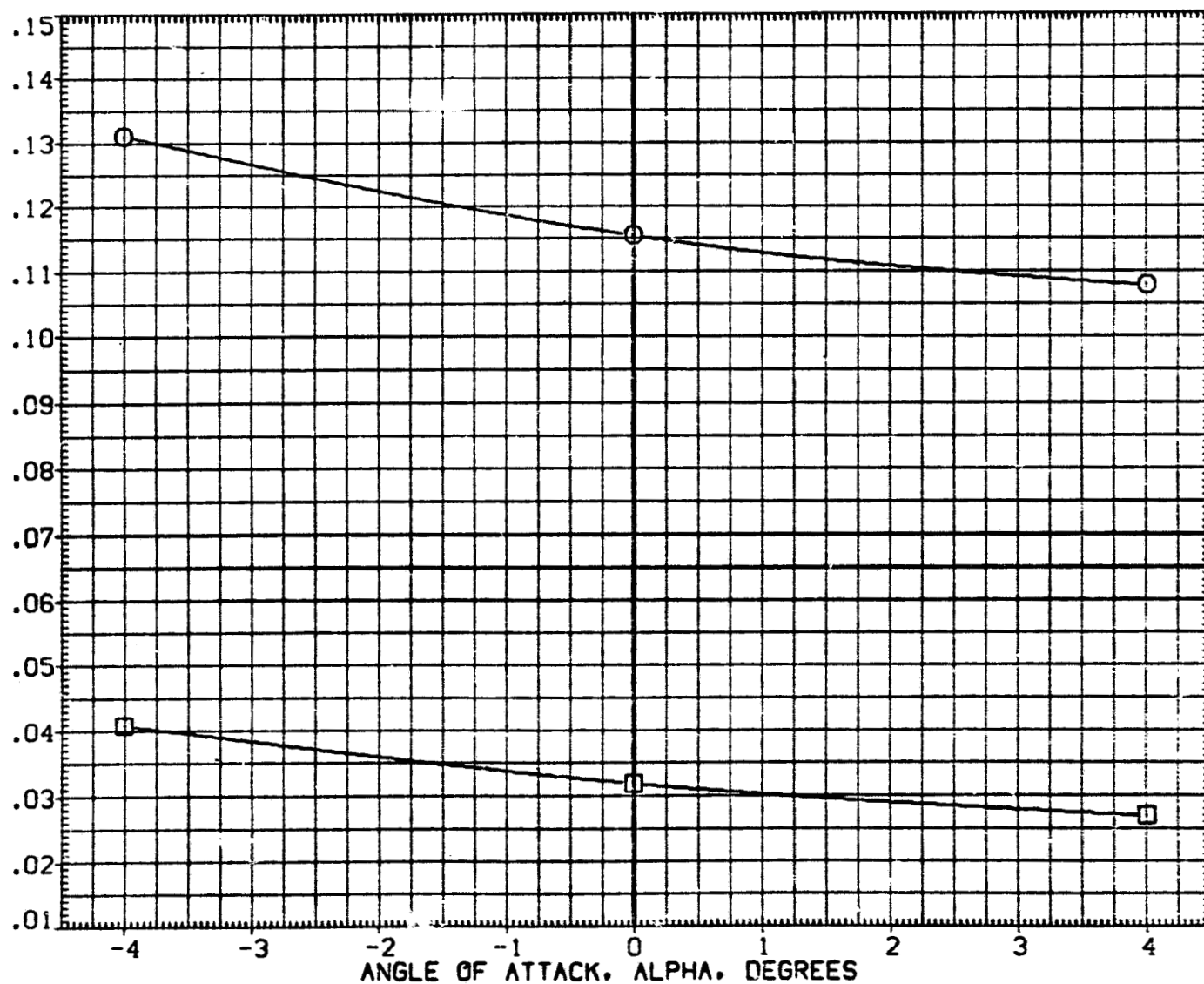




FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31) 	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)
(RE4X56) 	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
8.000	4.000	1.250	4.250	LREF	1290.3000	IN.
				BREF	1290.3000	IN.
				XMRP	.0000	IN.
				YMRP	.0000	IN.
				ZMRP	.0000	IN.
				SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

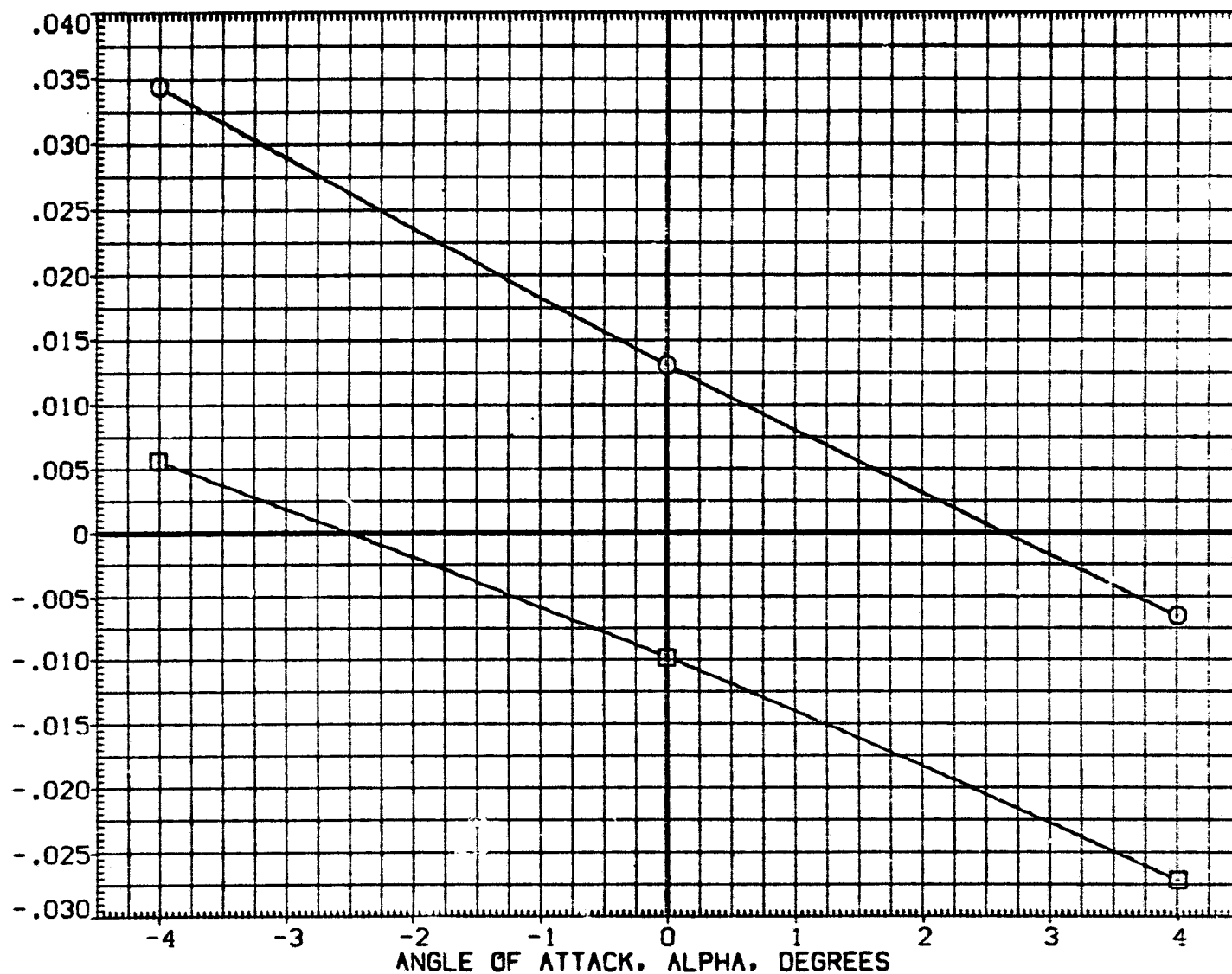


FIG. 12 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.25 PLUME OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4XA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	:290.3000 IN.
(RE4X94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4X78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

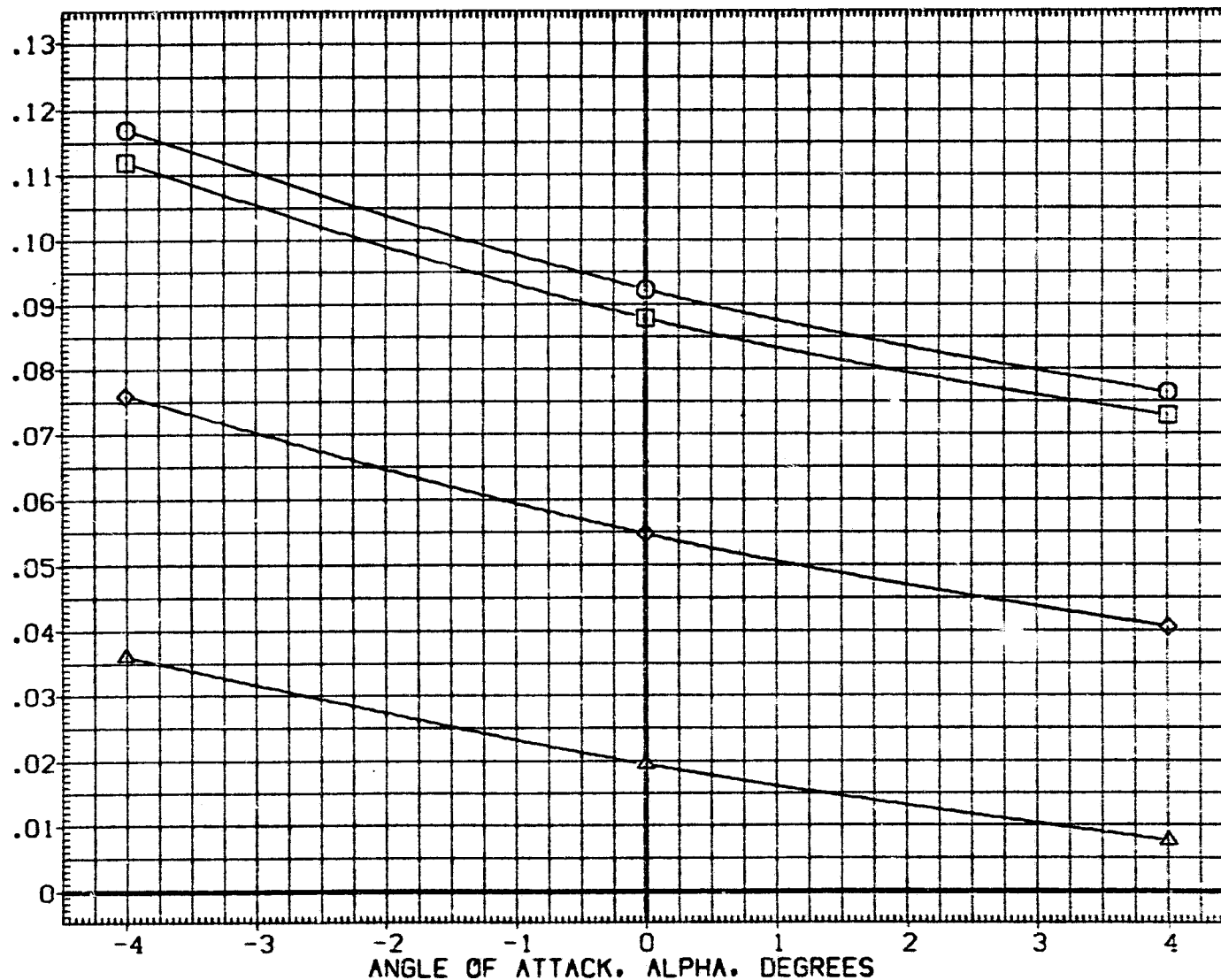


FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMECOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4XA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

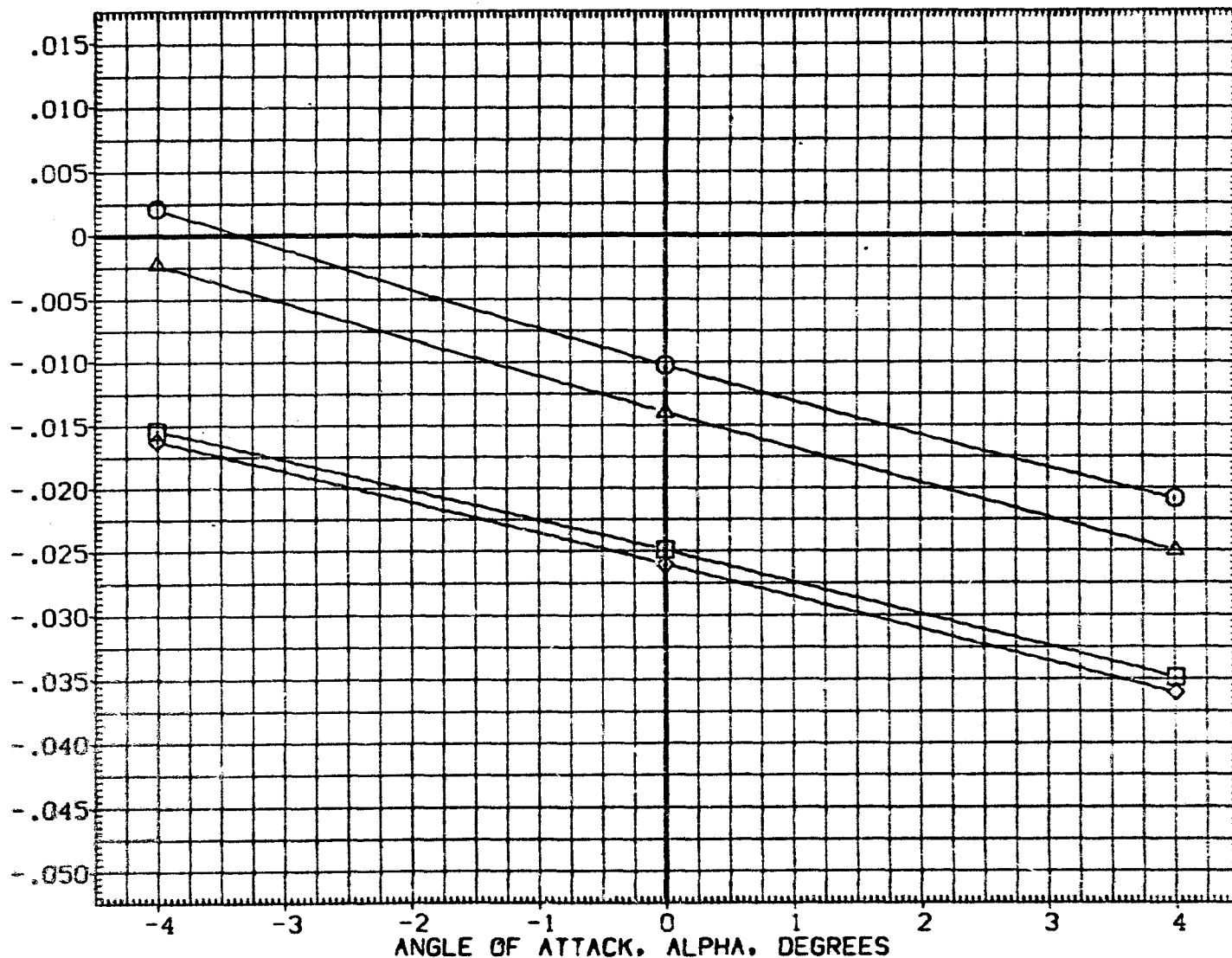


FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUME OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ. FT.
(RE4X57)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X68)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

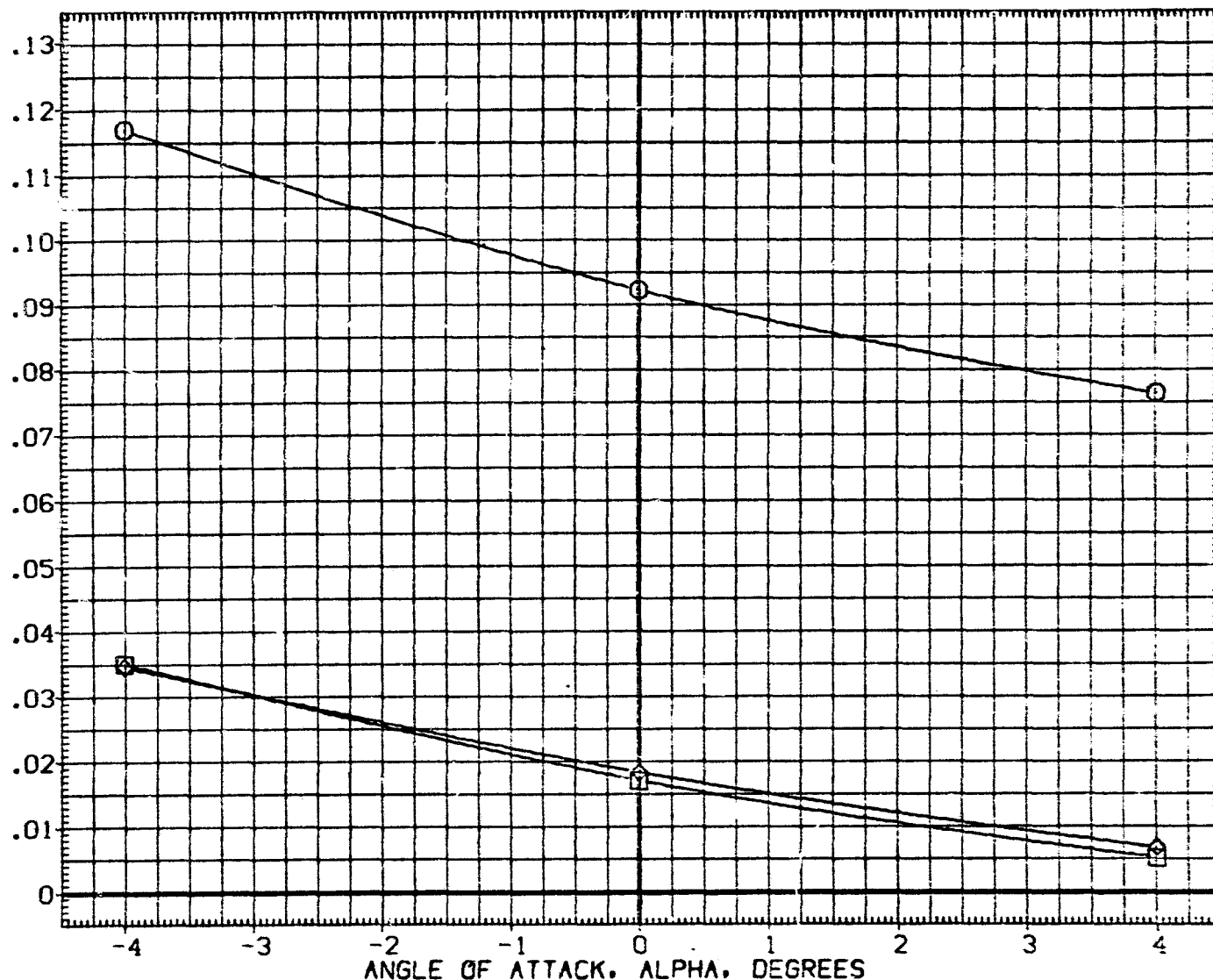


FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMECOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-02	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4X57)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X68)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

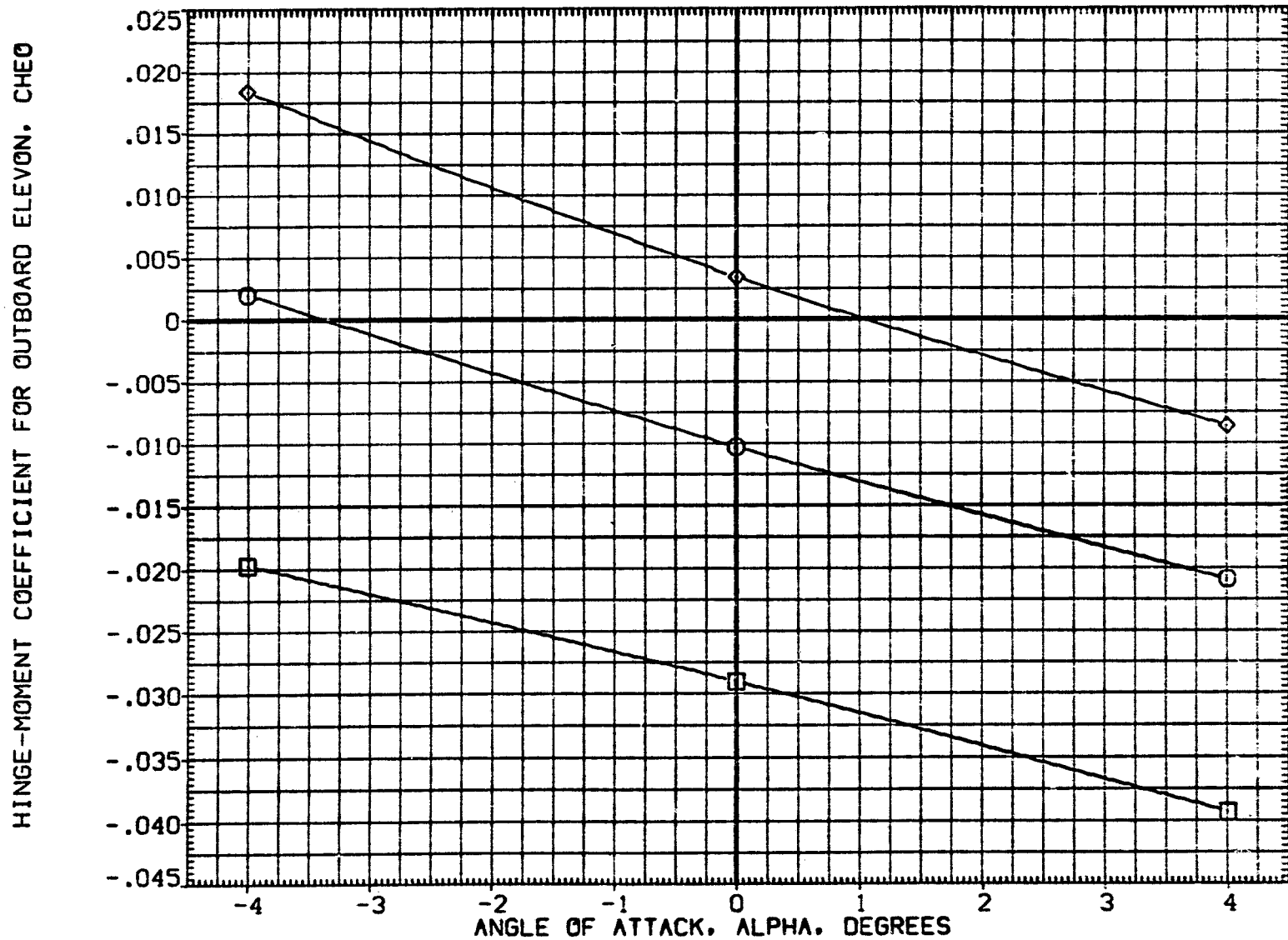


FIG. 13 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN PITCH, M=1.4 PLUMEOFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4YA0)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y90)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y74)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

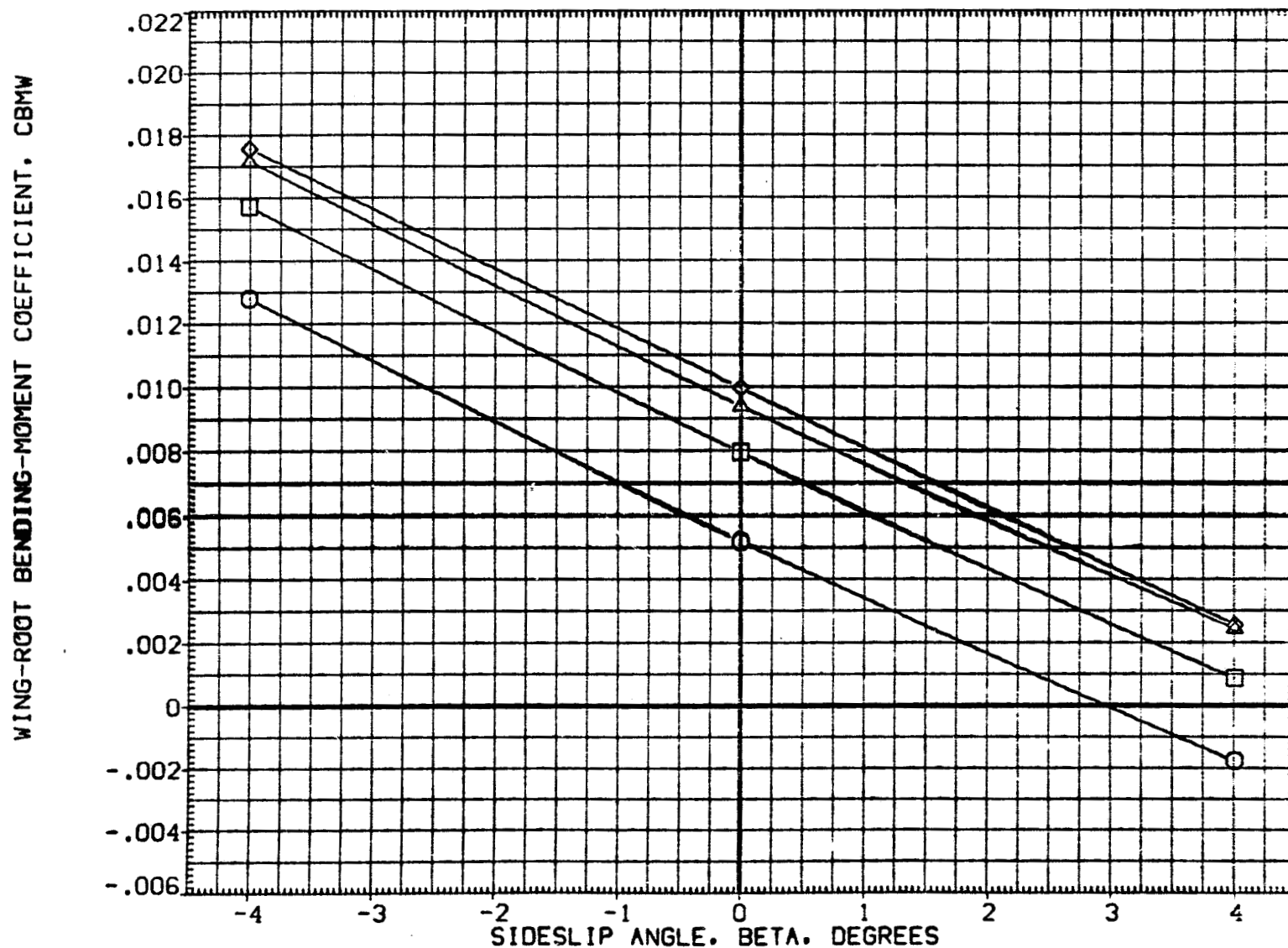


FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4YA0) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y90) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y74) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

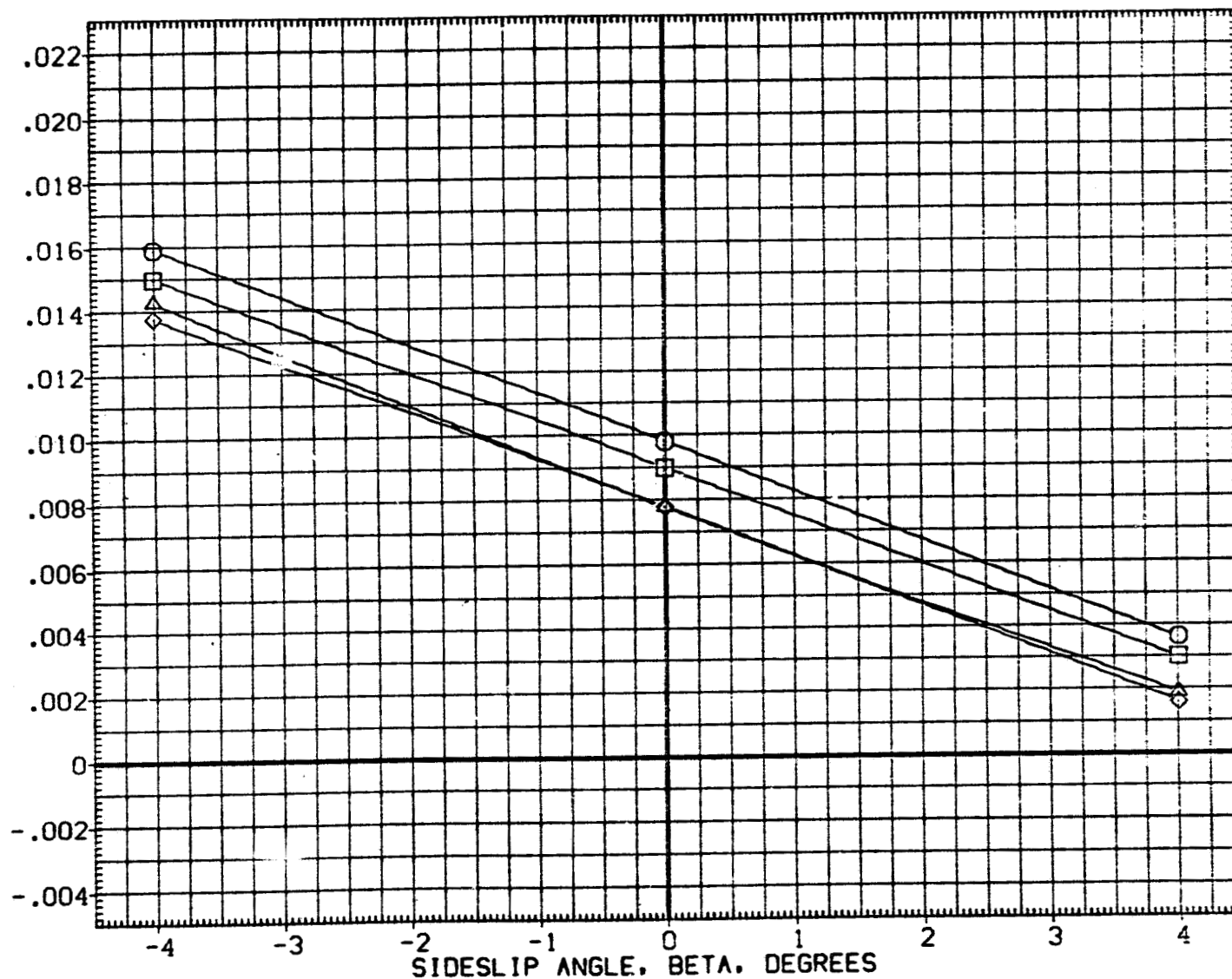


FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4YAO)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4Y90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4Y74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
.000	.000	.600	3.400	SREF 2690.0000 SQ.FT.
.000	4.000	.600	3.400	LREF 1290.3000 IN.
4.000	4.000	.600	3.400	BREF 1290.3000 IN.
8.000	.000	.600	3.400	XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

WING NORMAL-FORCE COEFFICIENT, CNW

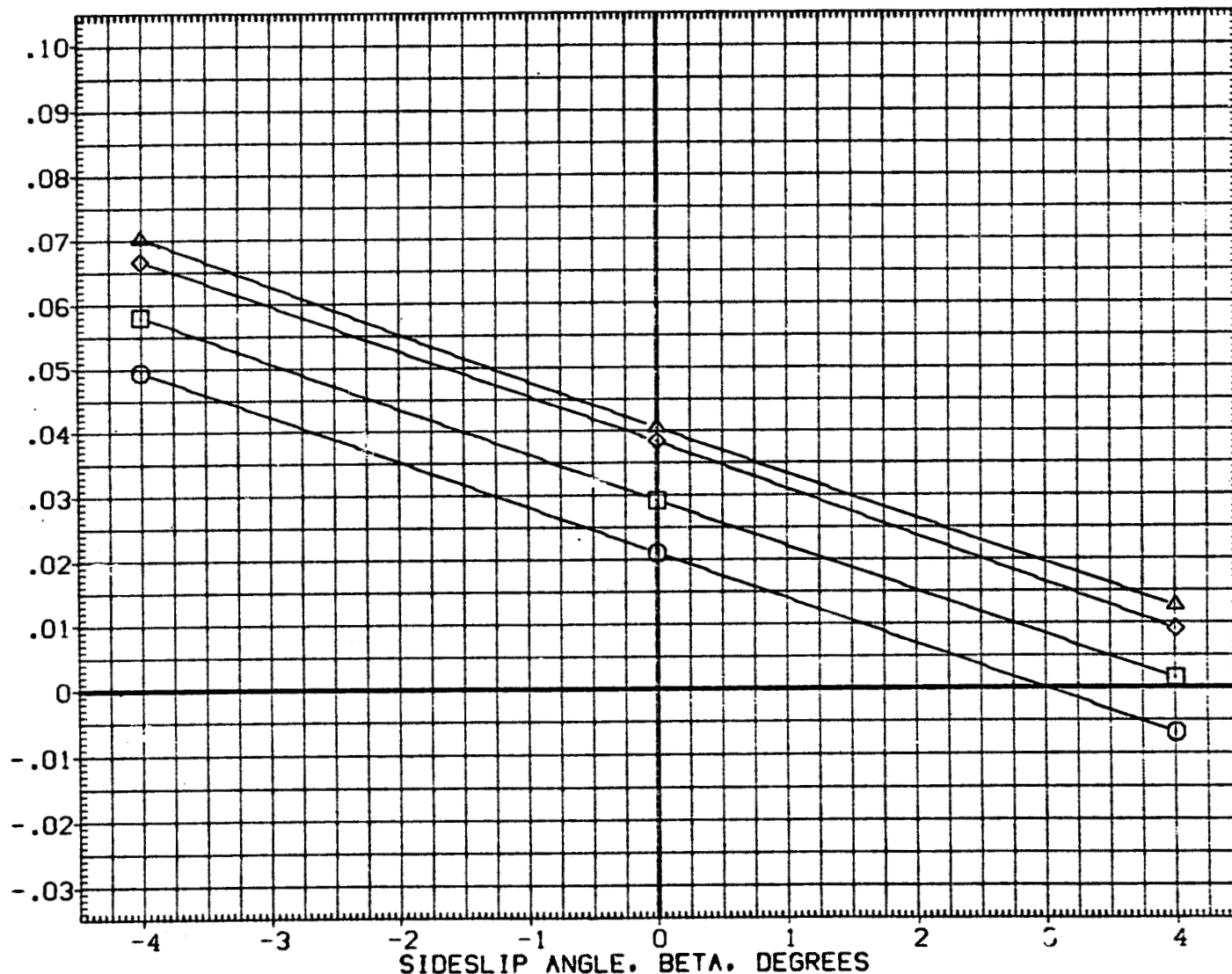


FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4Y84) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y53) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y64) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

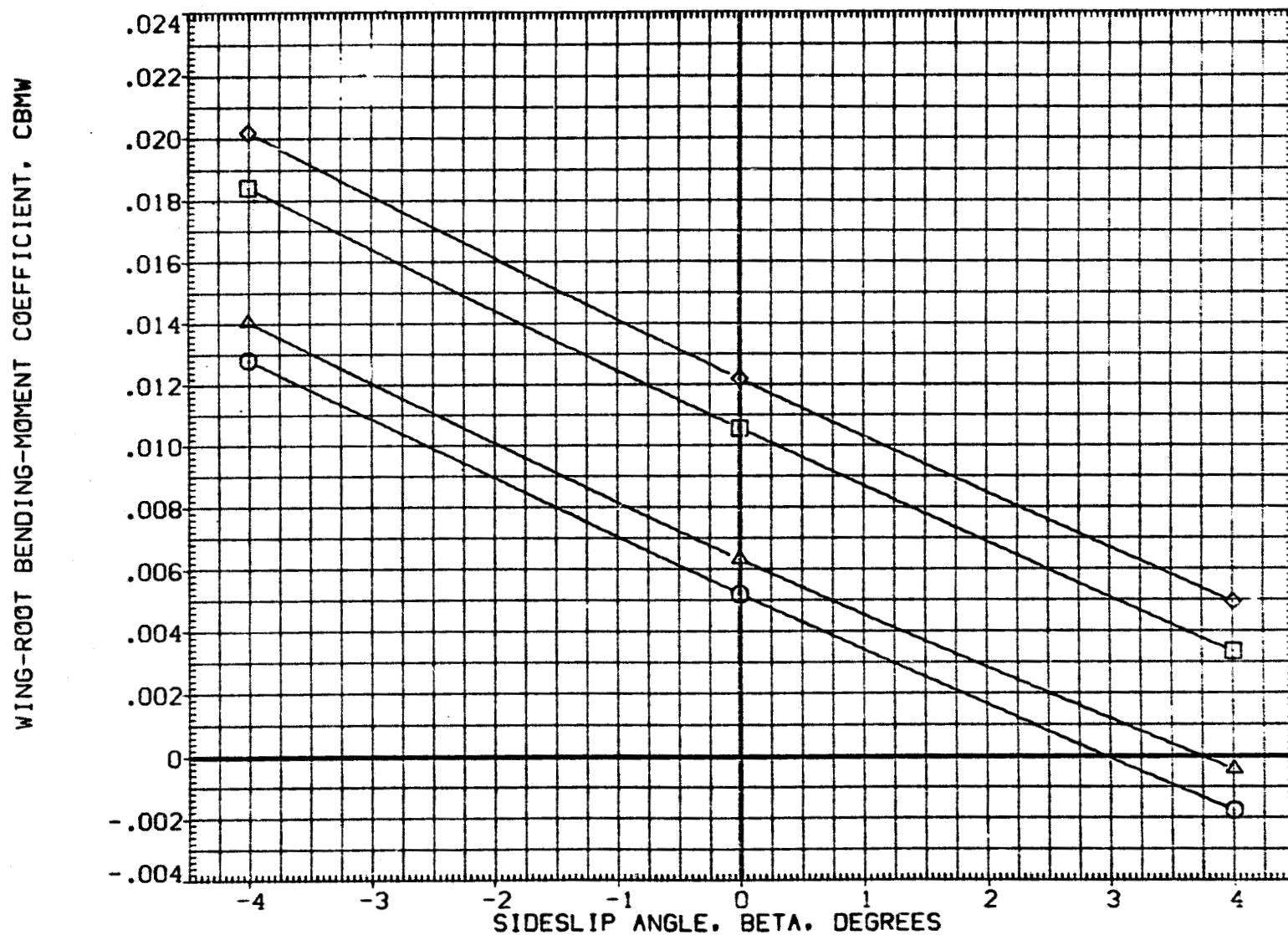


FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y84)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y53)	△	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y64)	△	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

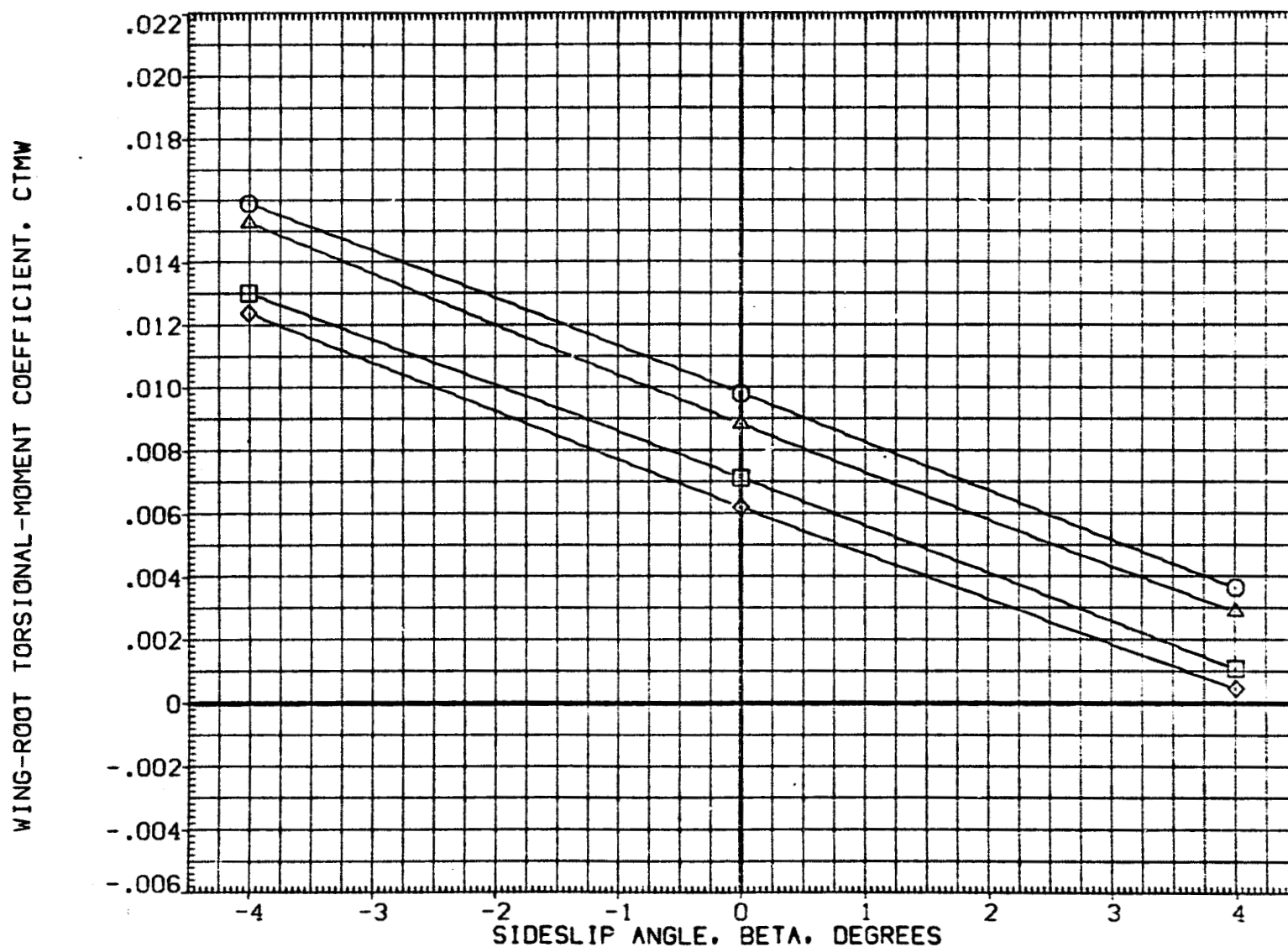


FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

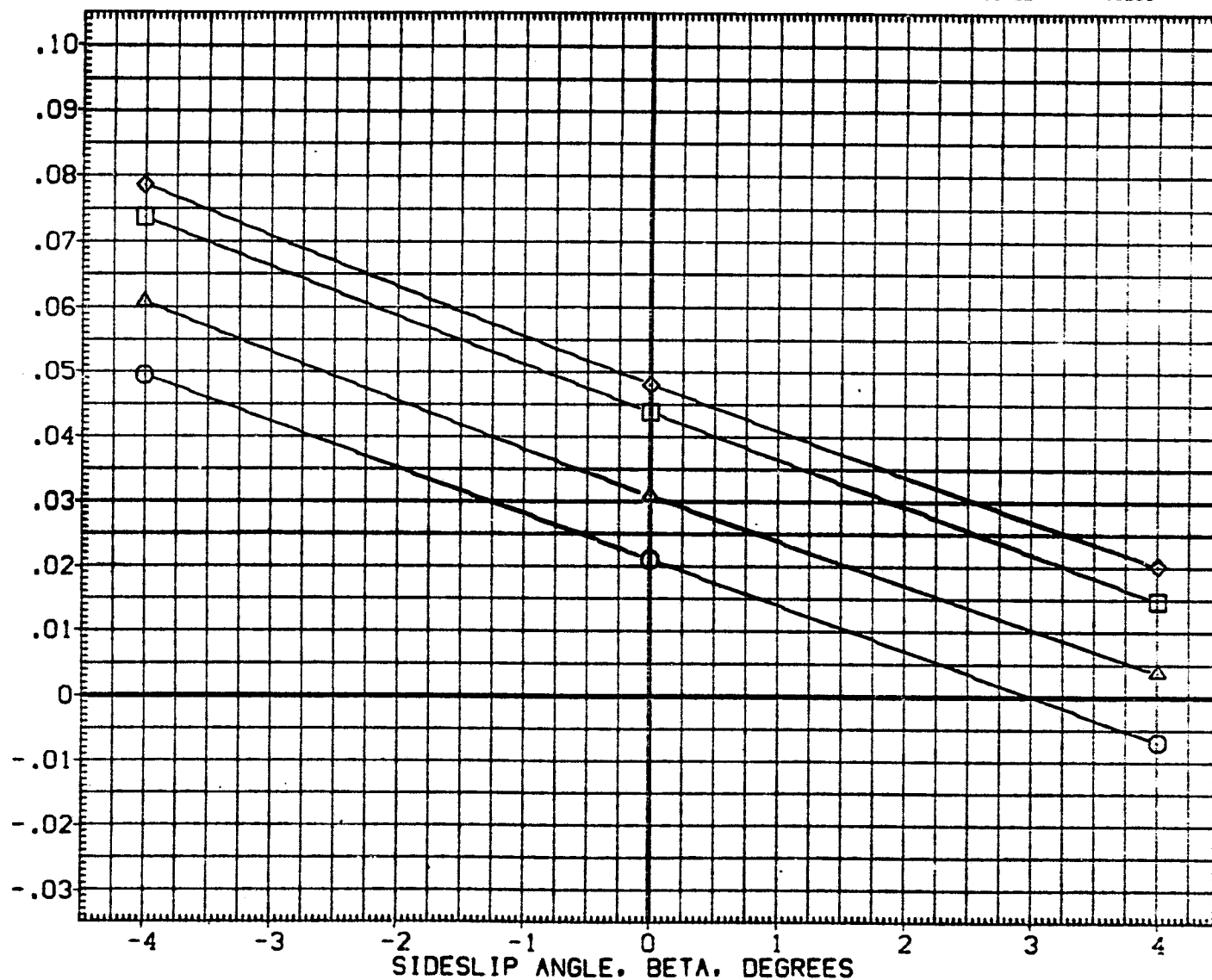


FIG. 14 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4YA1)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y91)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y75)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

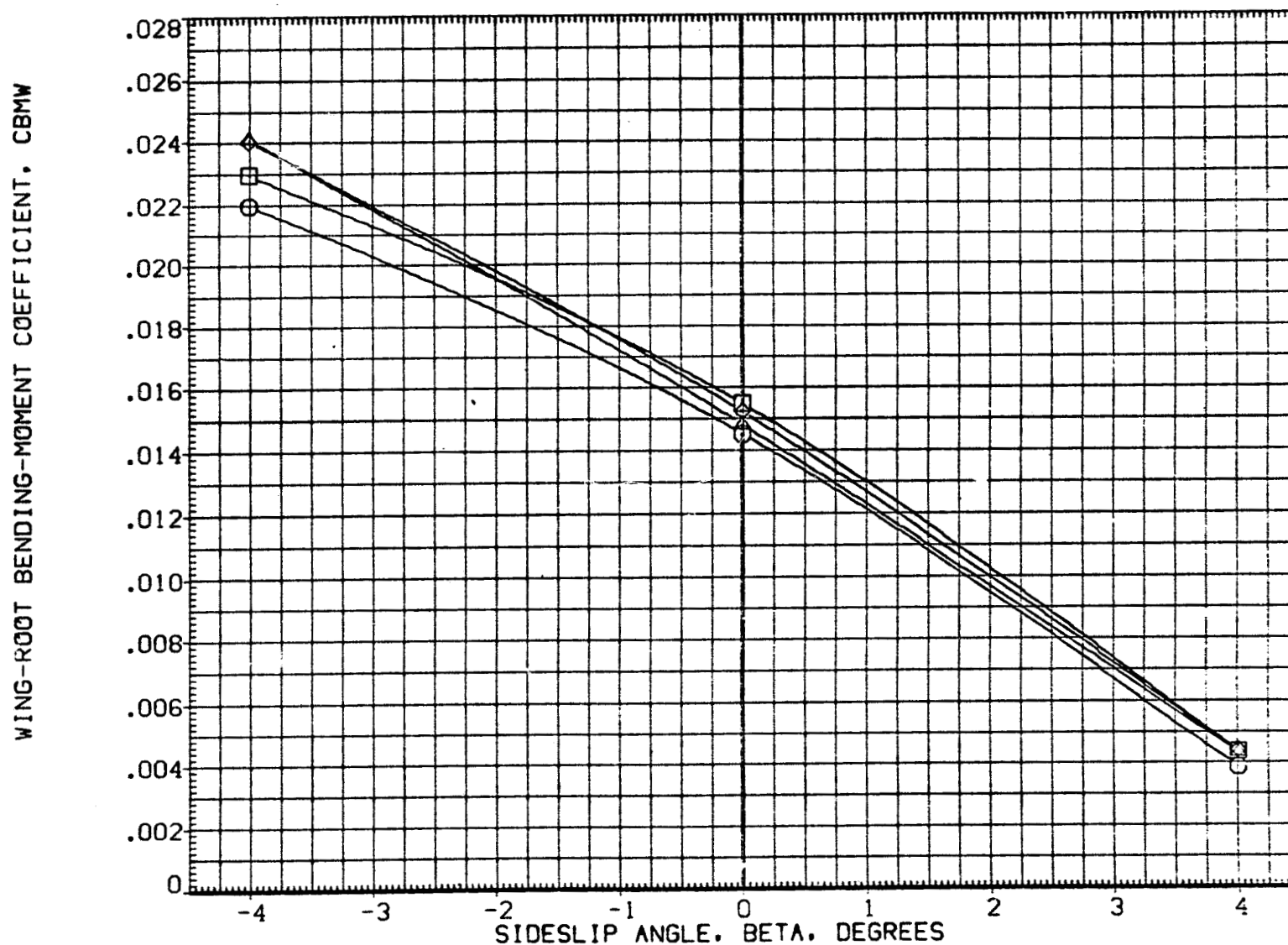


FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9

(A) ALPHA = .00

PLUMES OFF

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4YA1)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y91)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y75)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

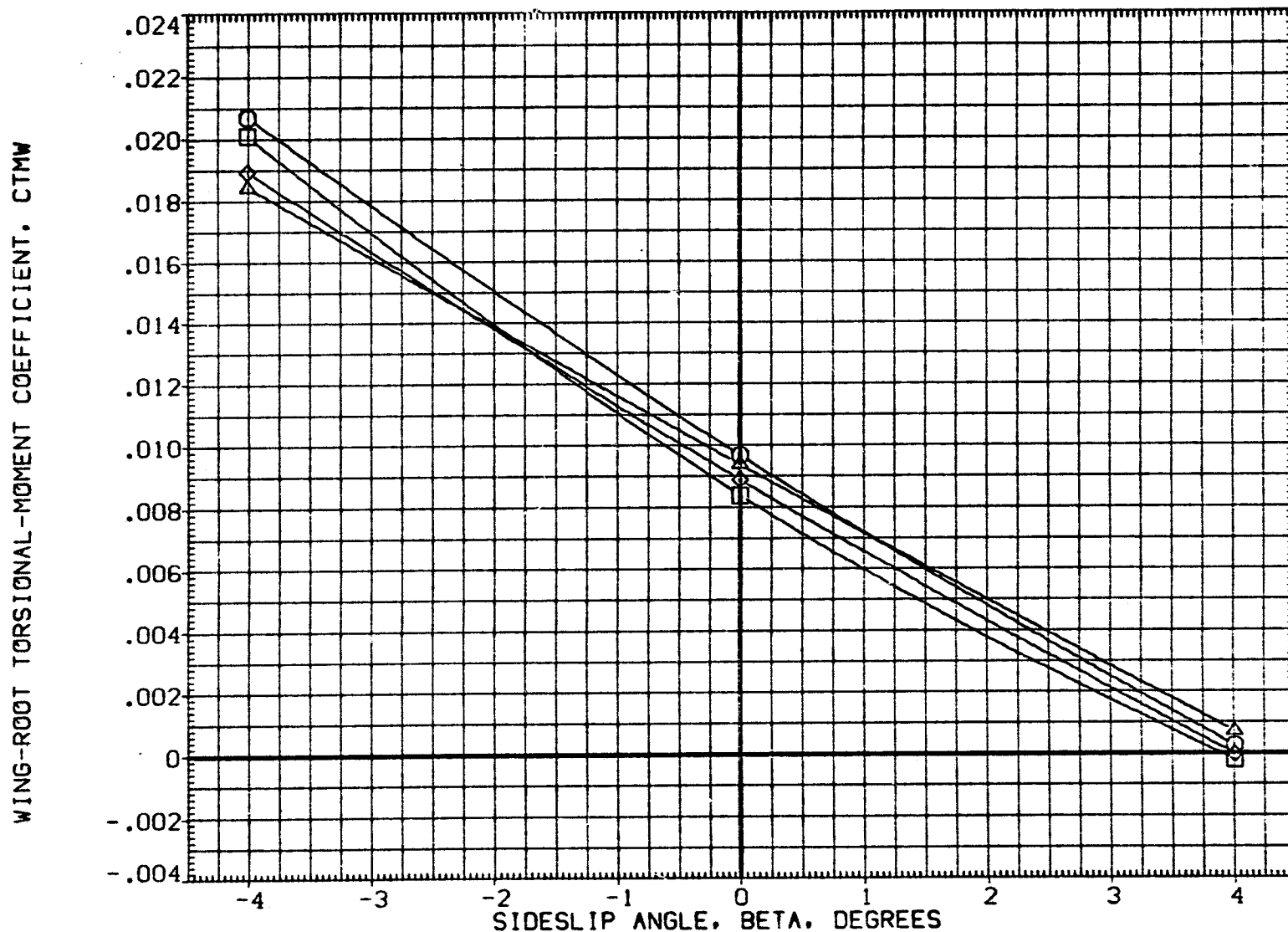


FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9

(A) ALPHA = .00

PLUMES OFF

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4YA1)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y91)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y75)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

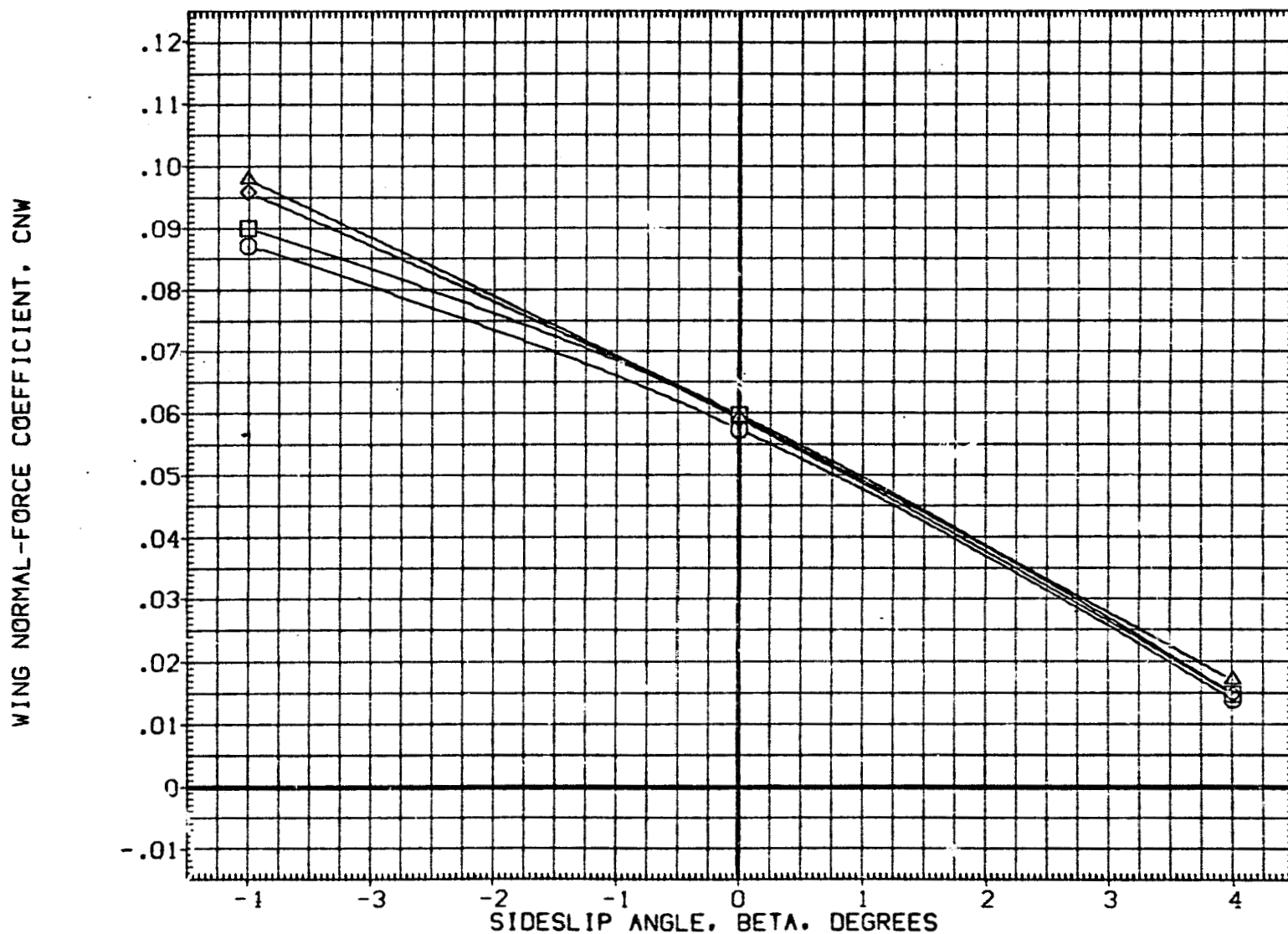


FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

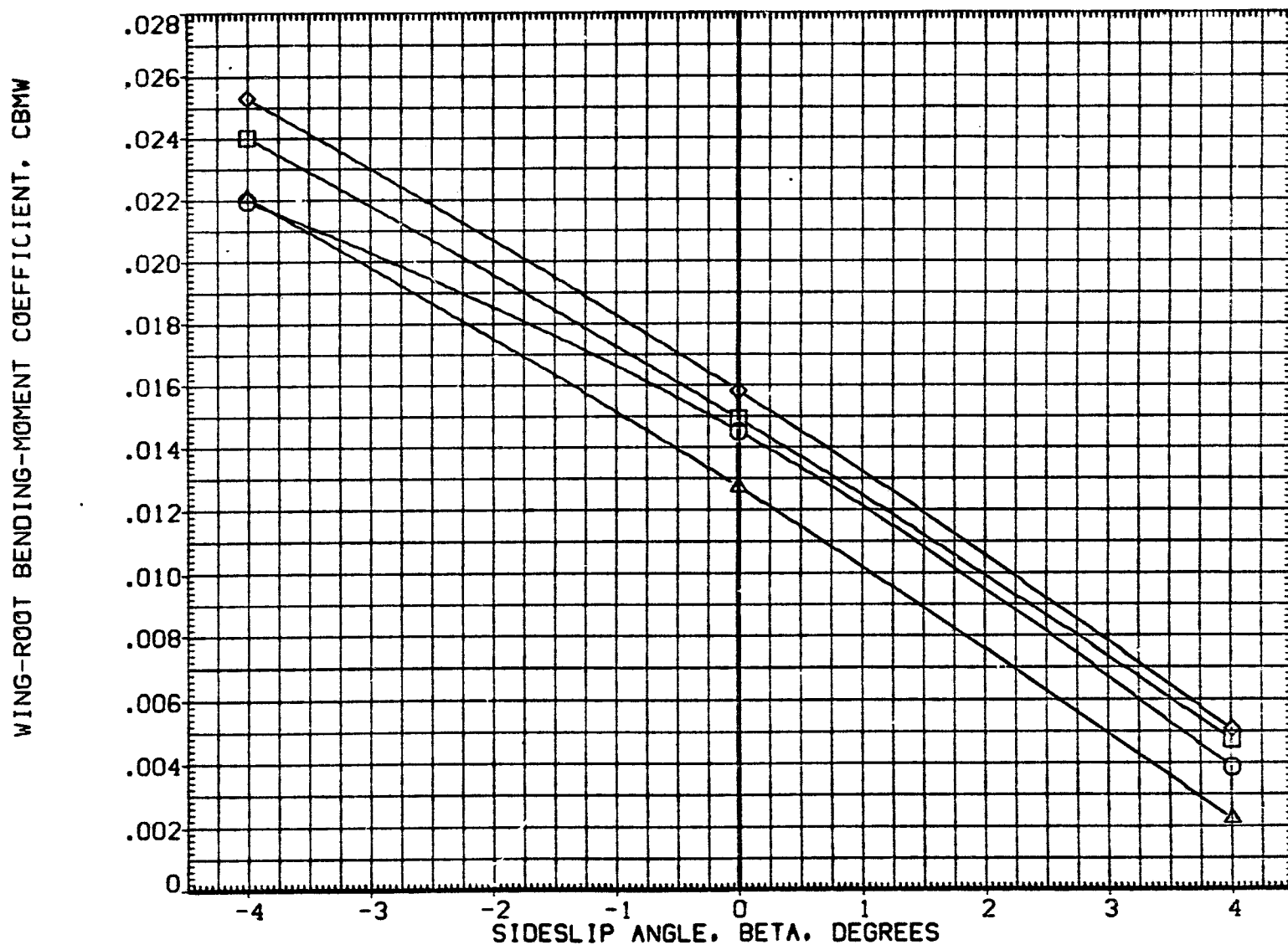


FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MAC-1	RN/L	REFERENCE INFORMATION	
(RE4Y29)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y85)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y54)	△	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y65)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
							YMRP	.0000 IN.
							ZMRP	.0000 IN.
							SCALE	.0200

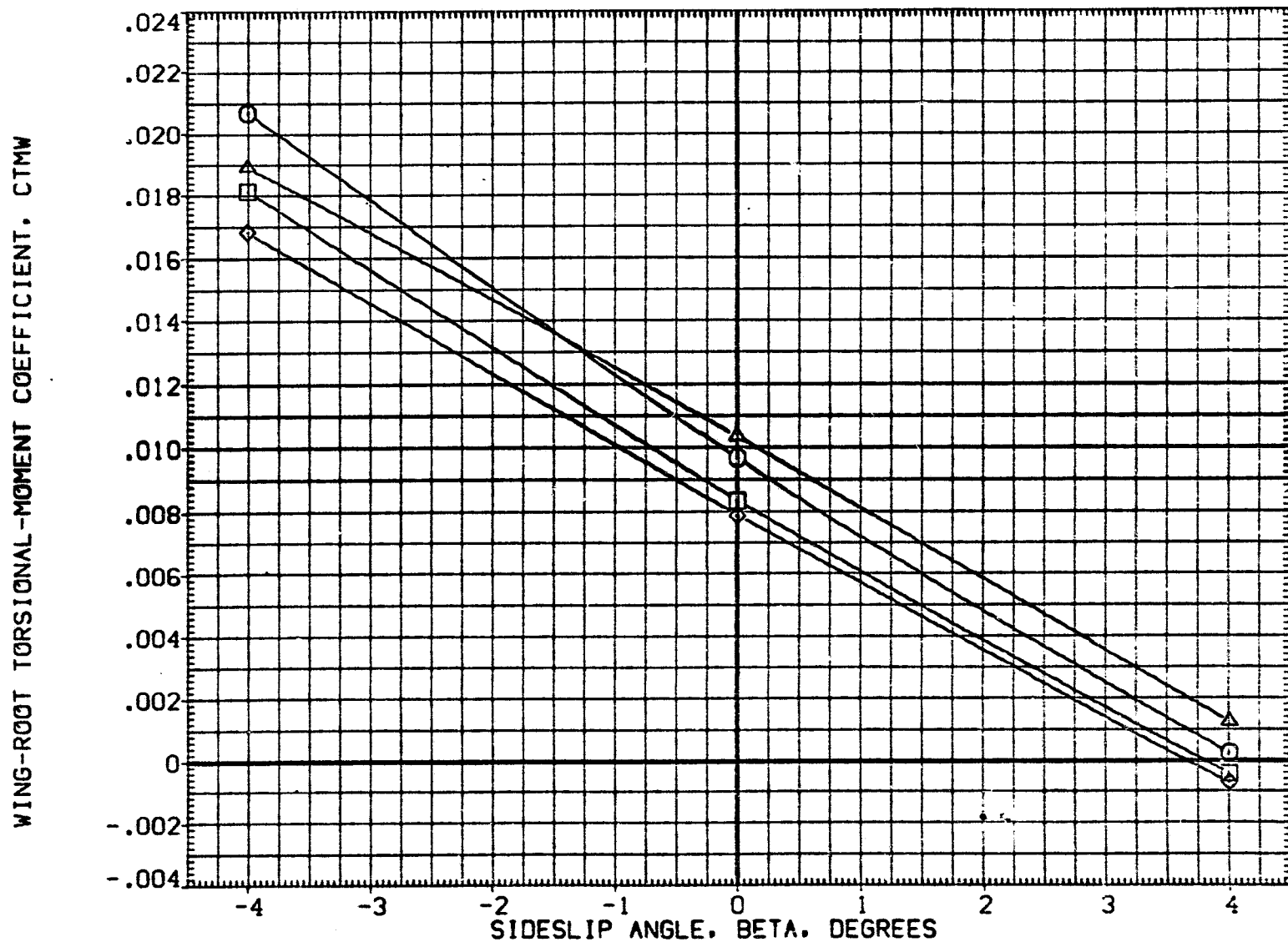


FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

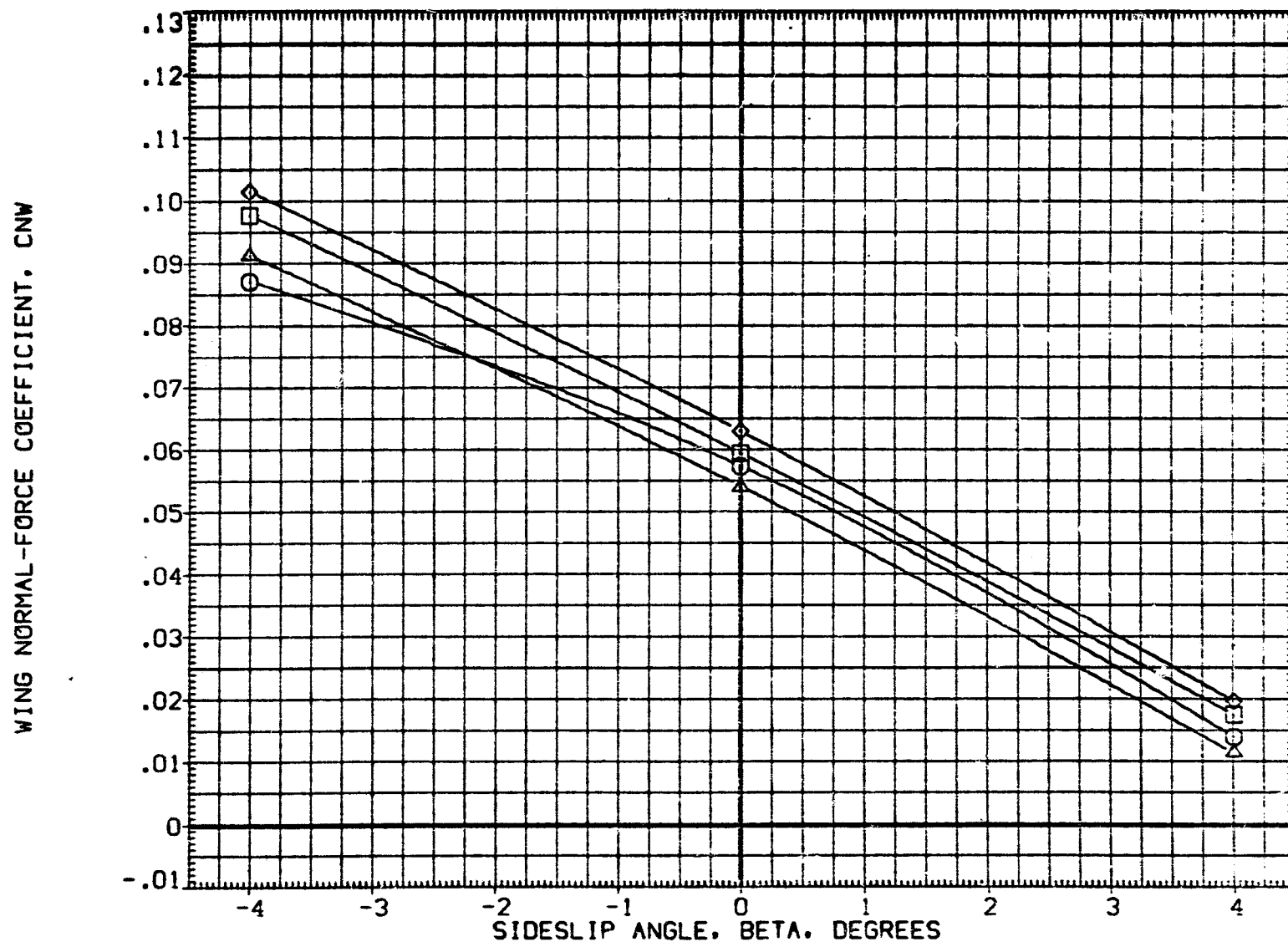


FIG. 15 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

PLUMES OFF
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4YA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

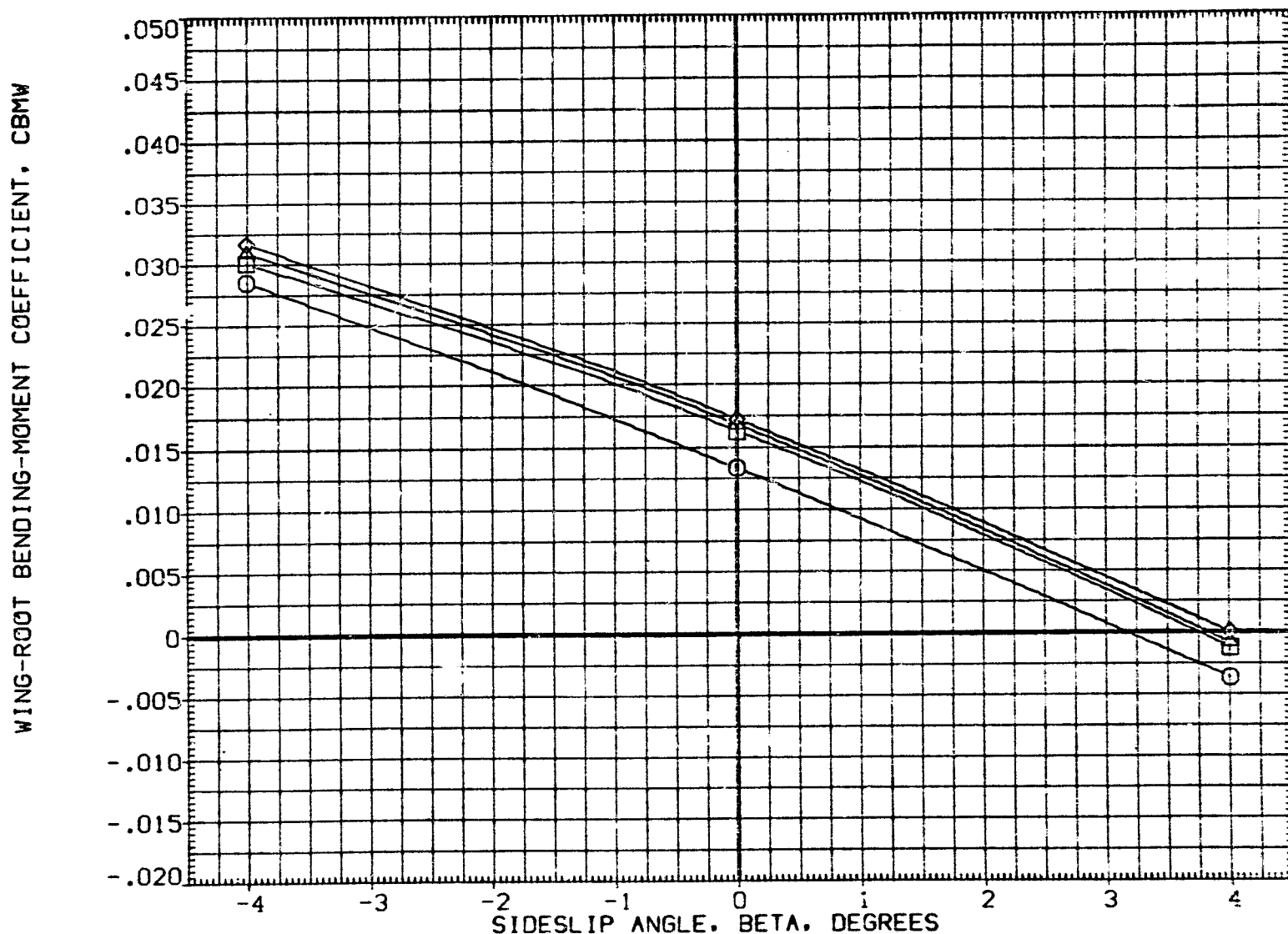


FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4YA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

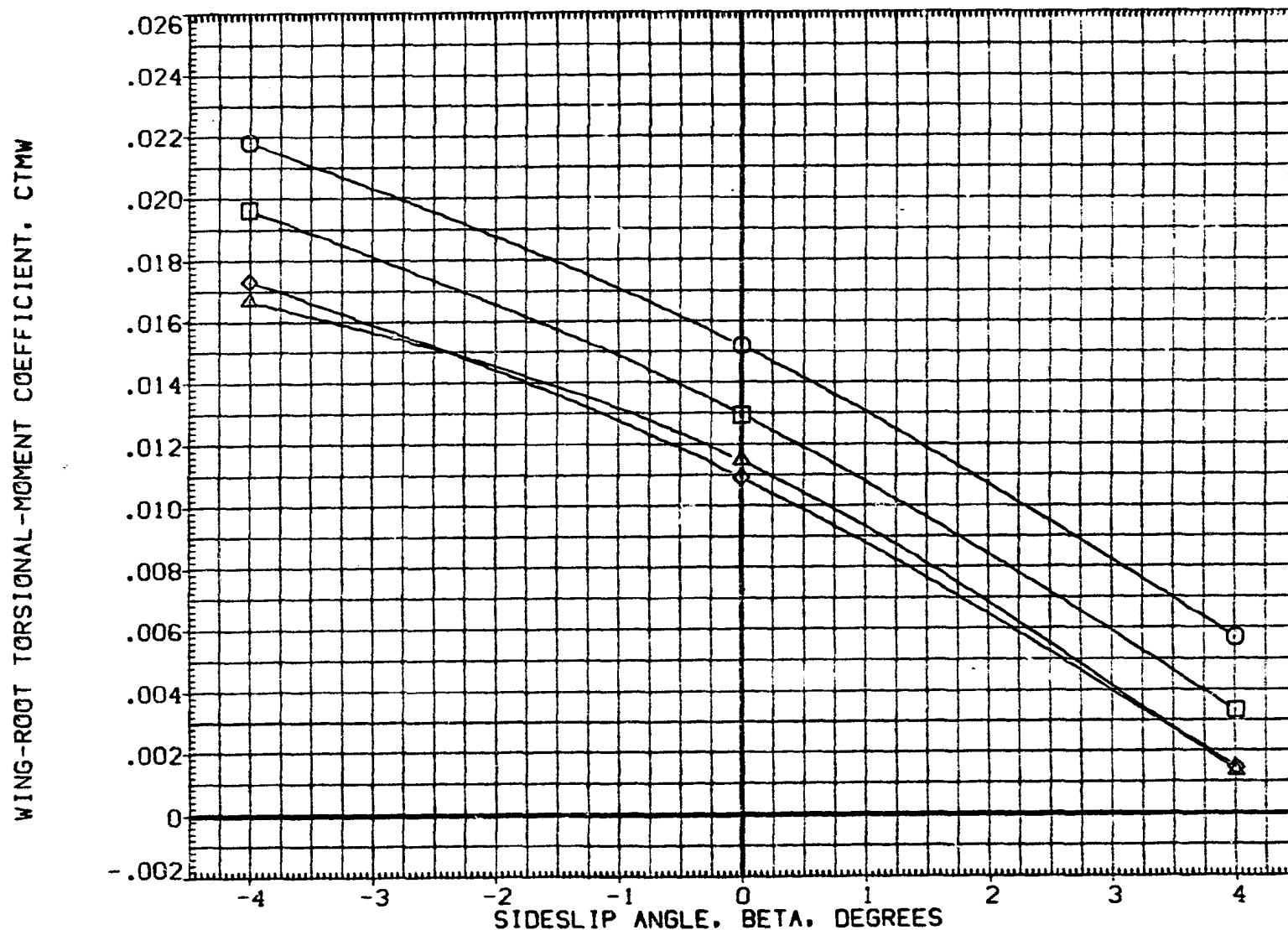


FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

(A) ALPHA = .00

PLUMES OFF

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30) □	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4YA2) □	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y92) △	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y76) △	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

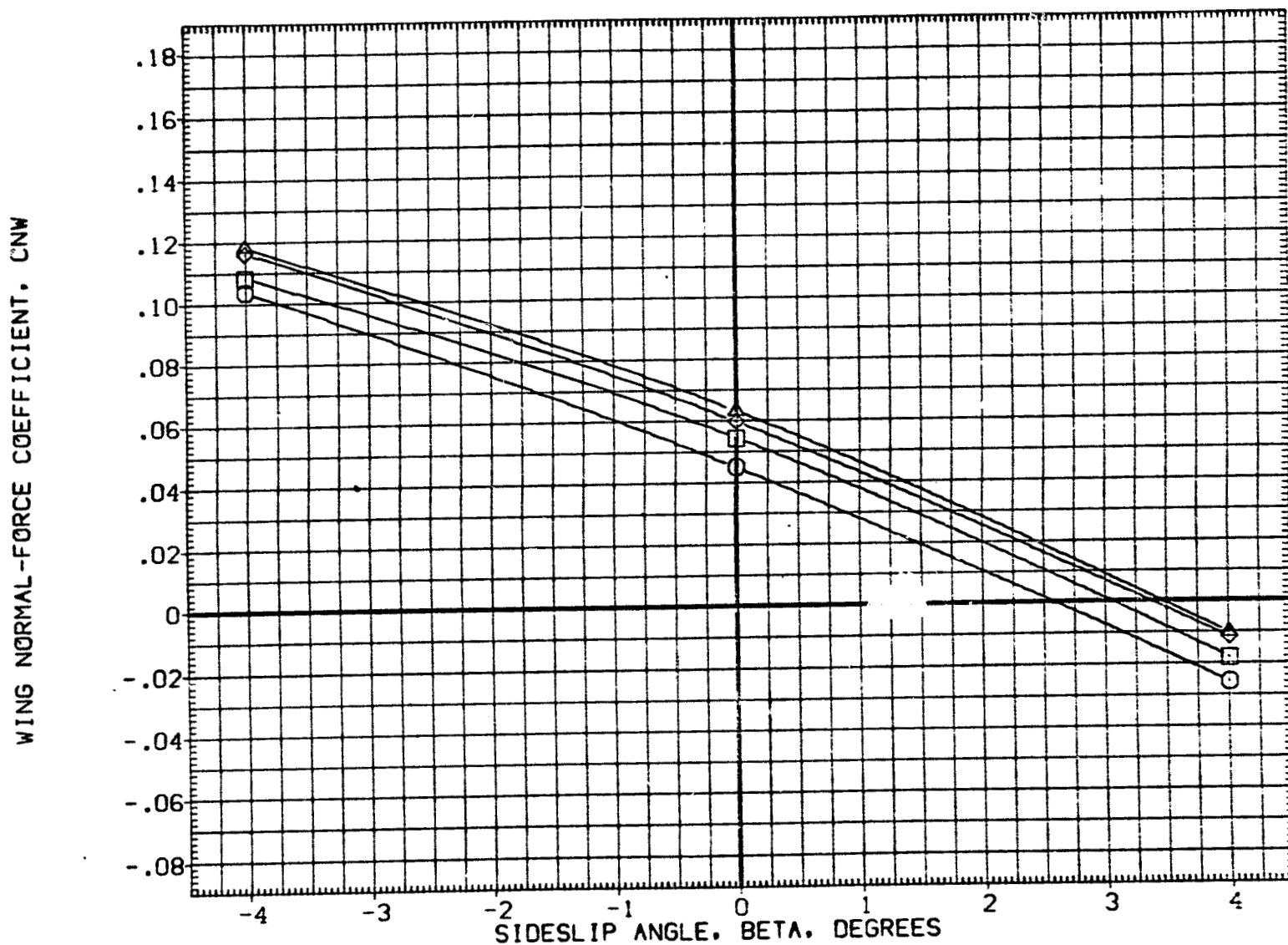


FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMAT	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000
(RE4Y86)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000
(RE4Y55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000
(RE4Y66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0200

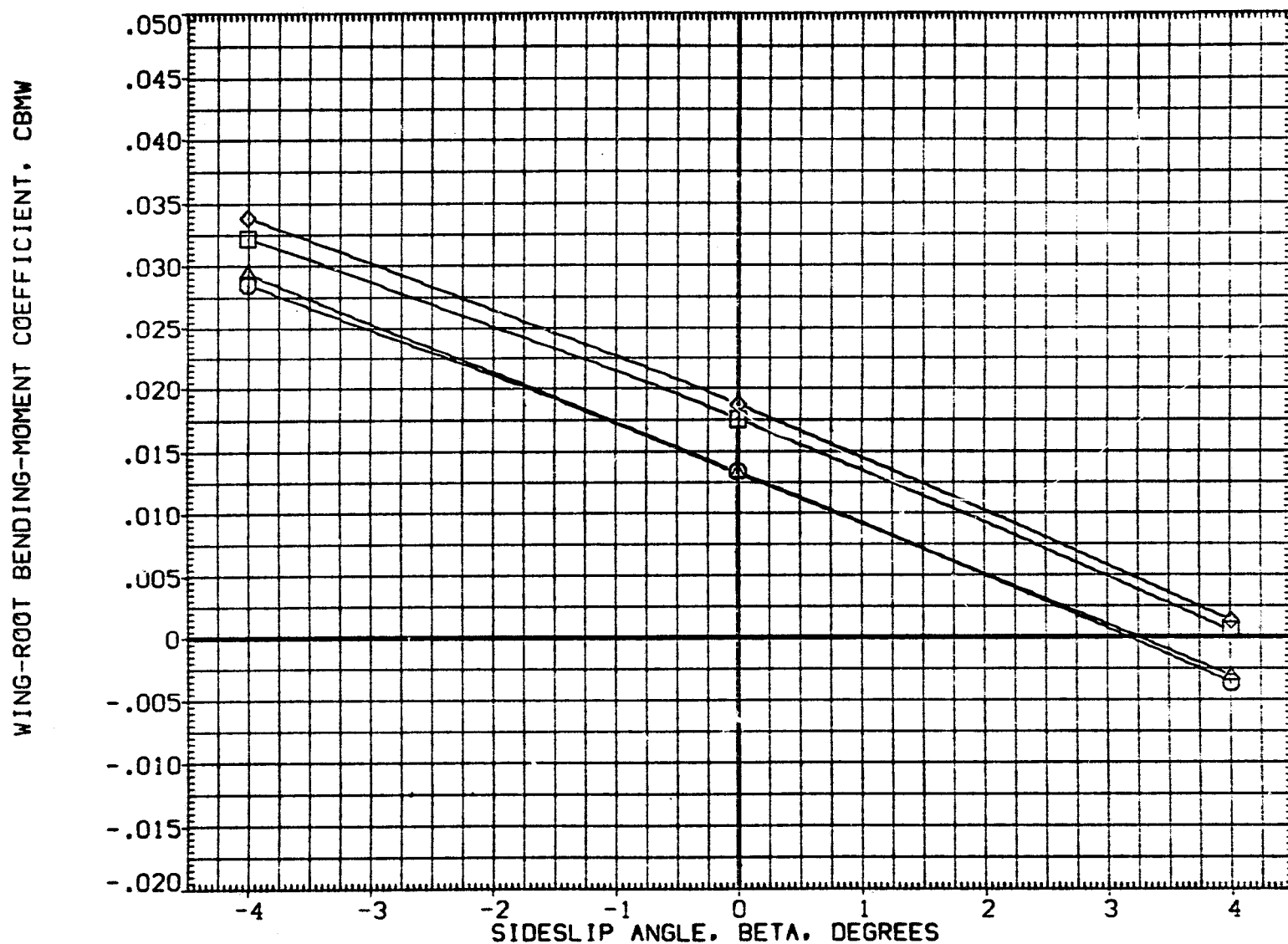


FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

(A) ALPHA = .00

PLUMES OFF

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y86)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

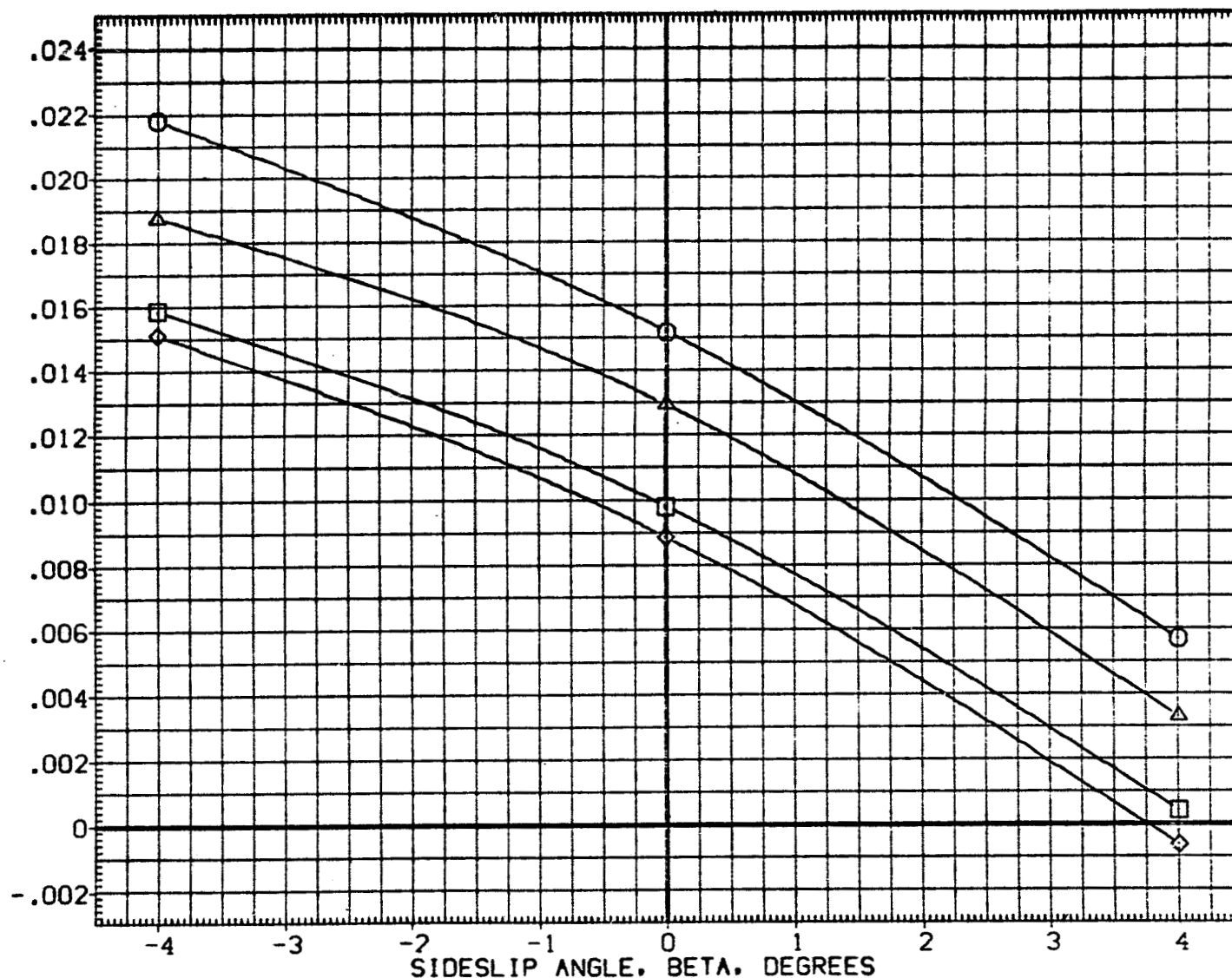






FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y86) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y55) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y66) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMSP	.0000	IN.
						YMSP	.0000	IN.
						ZMSP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

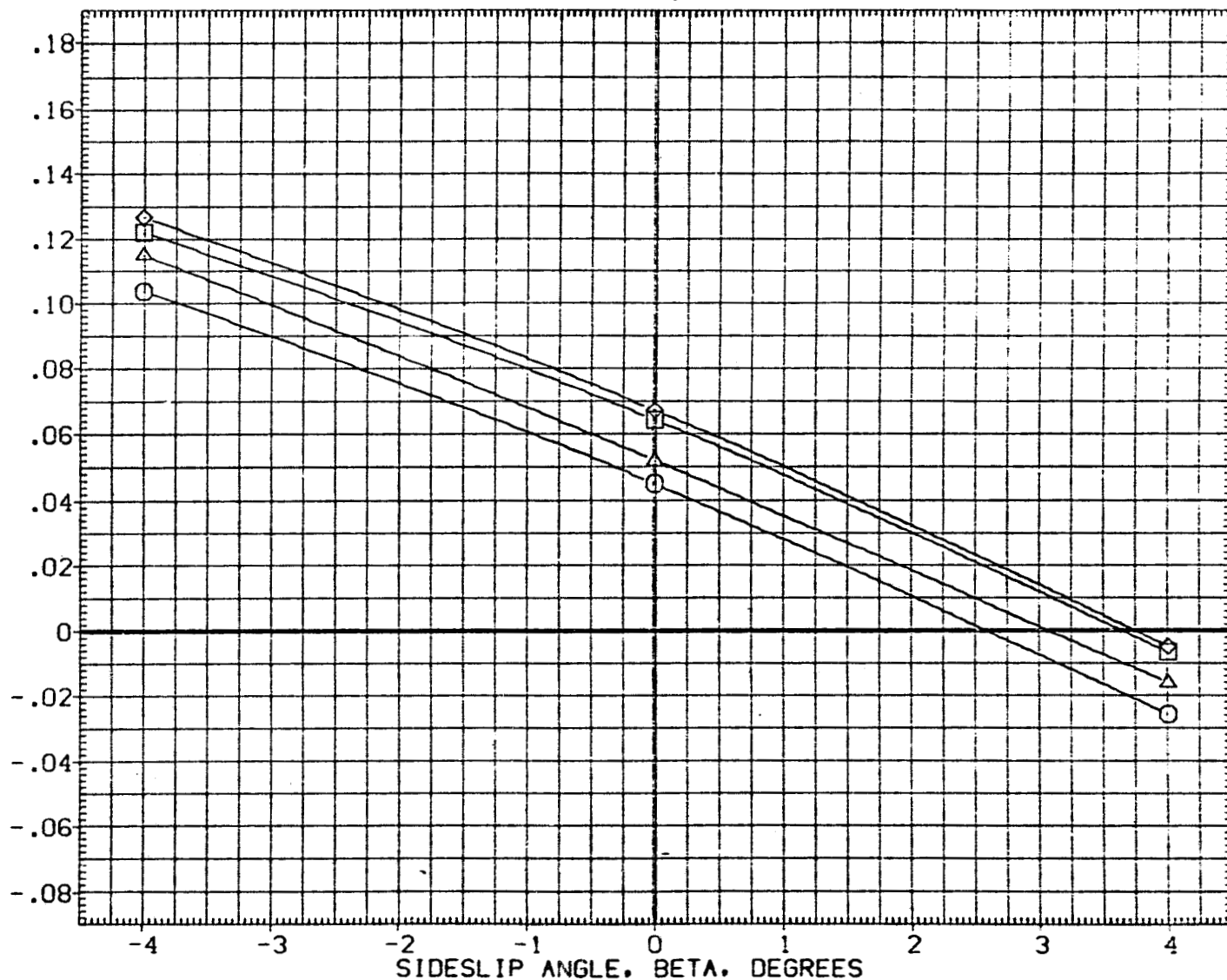


FIG. 16 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

(A) ALPHA = .00

PLUMES OFF

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4YA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y77)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

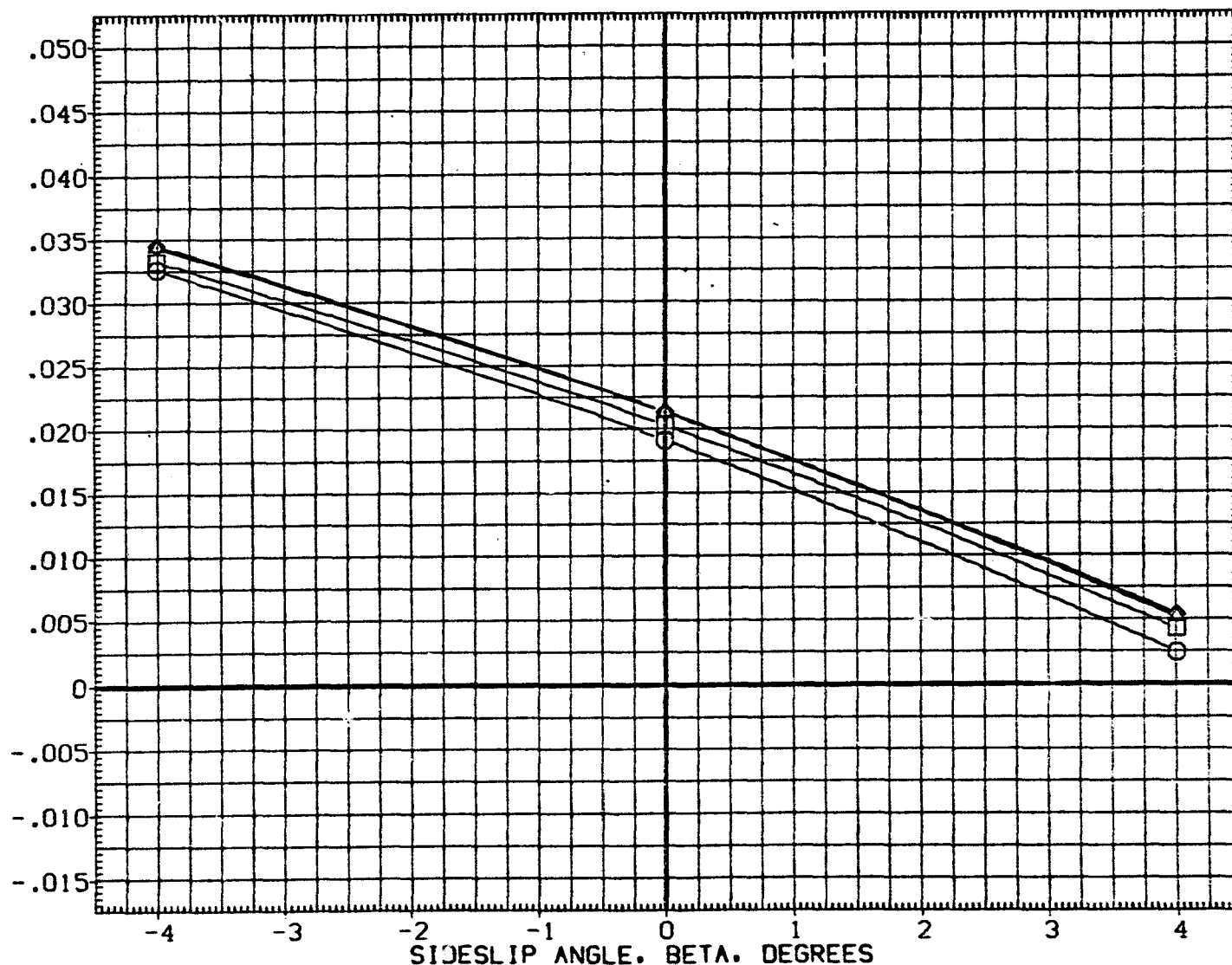


FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4YA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y77)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

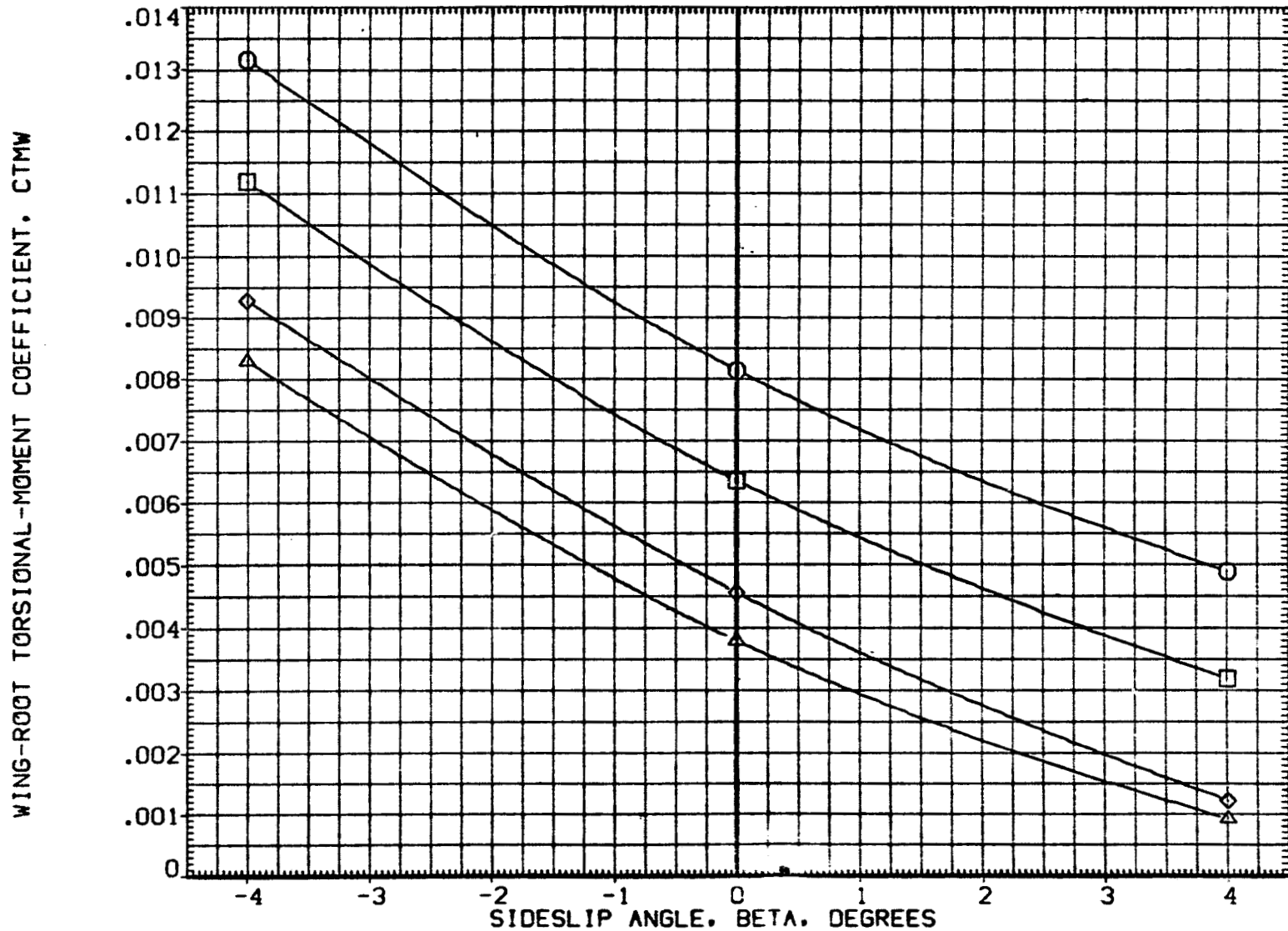


FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y43)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y93)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y77)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

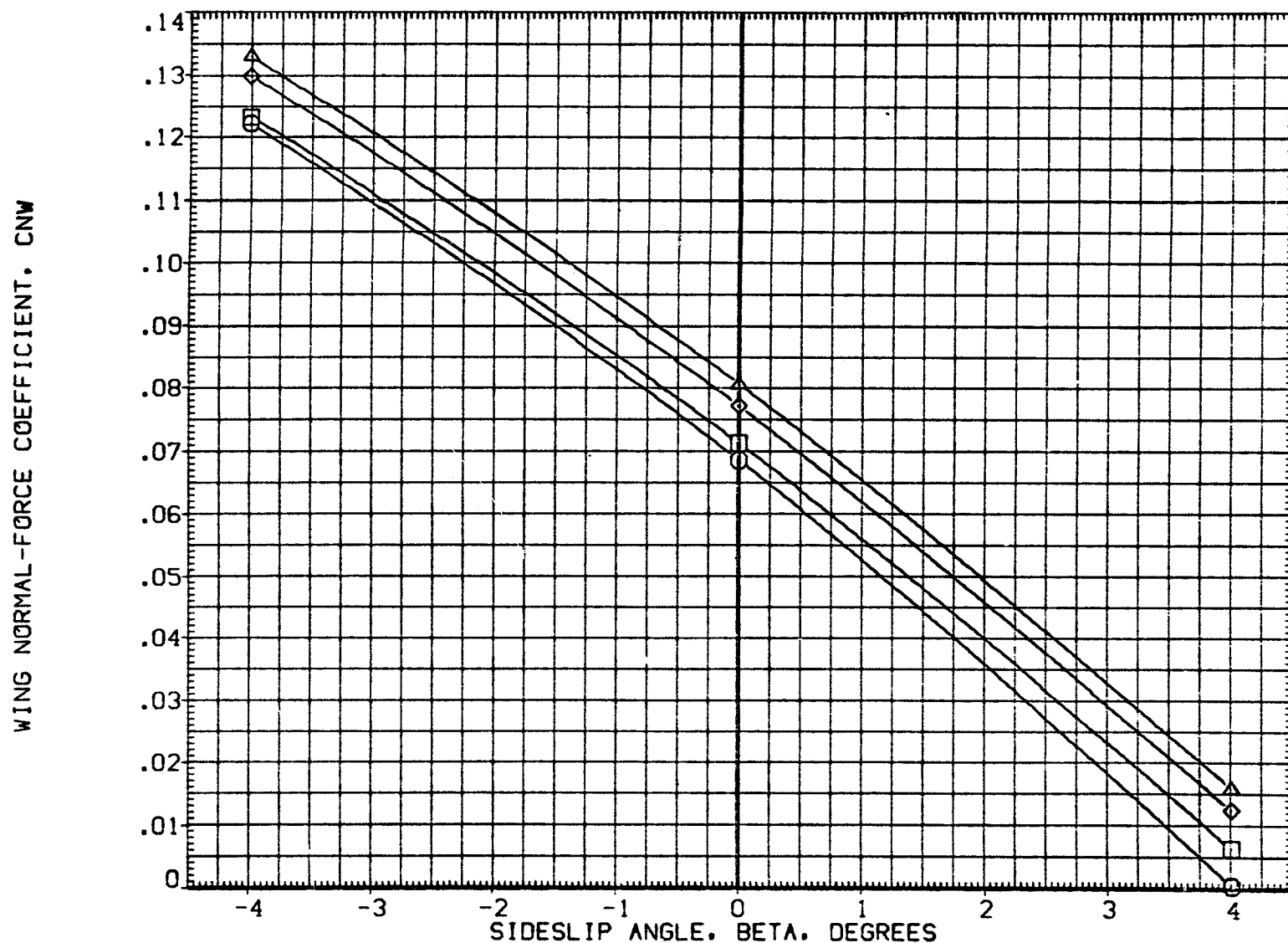


FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SR8 OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y56)	ARC 11-023 1A80 OTS (SR8 OFF) (SSME OFF)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
						BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

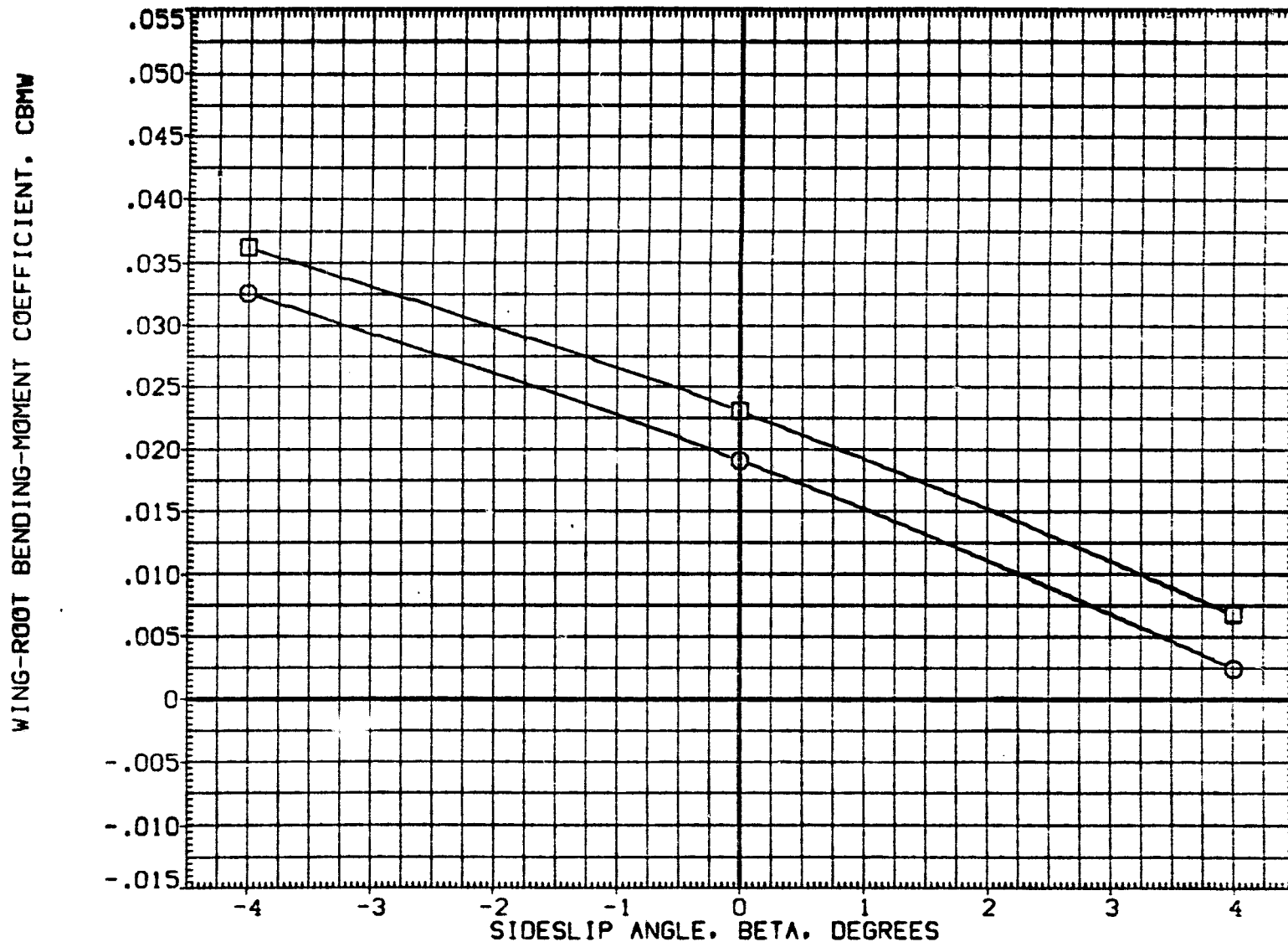


FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y56)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
						BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

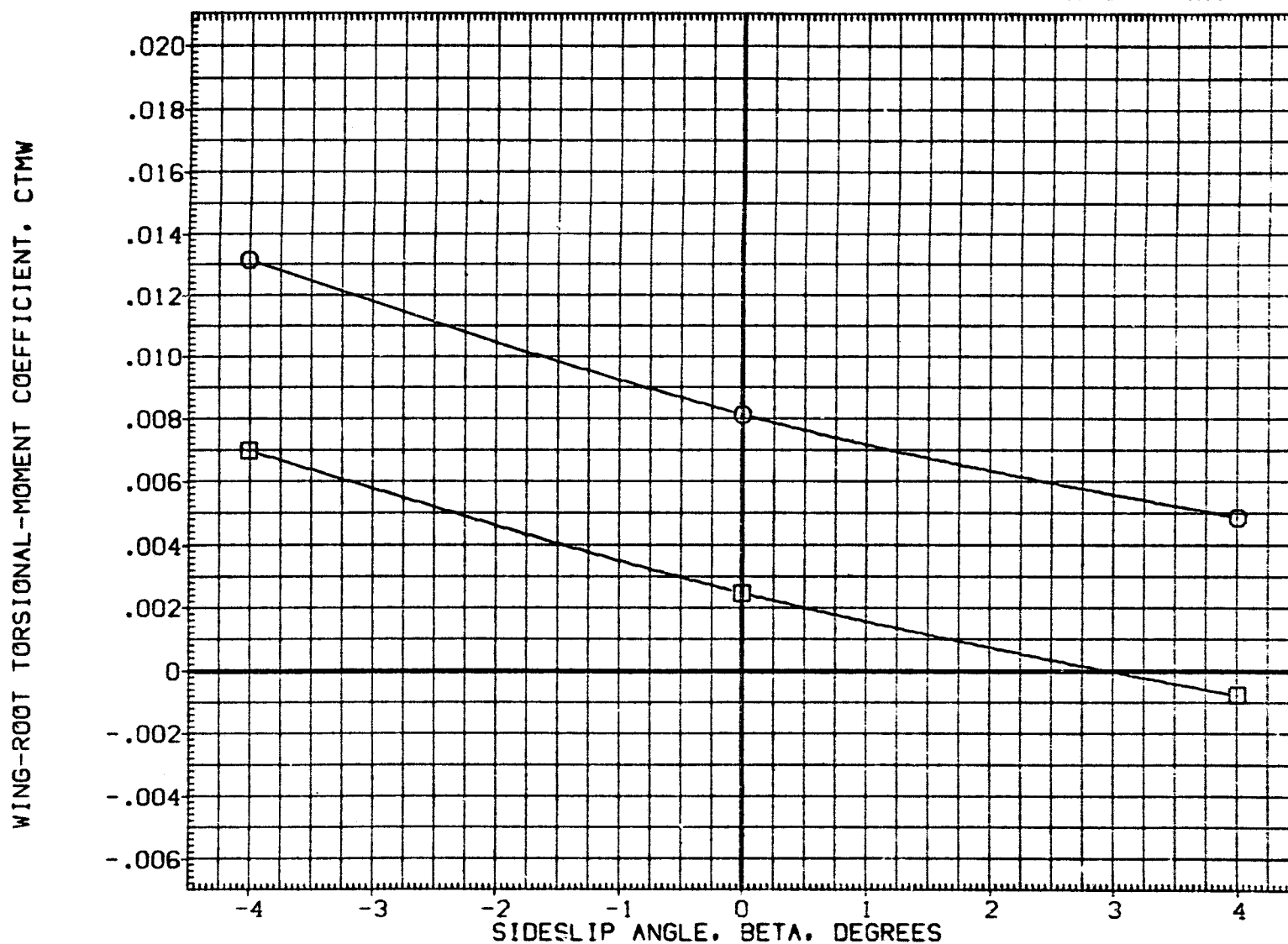


FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y56)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.250	4.250	LREF	1290.3000	IN.
						BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

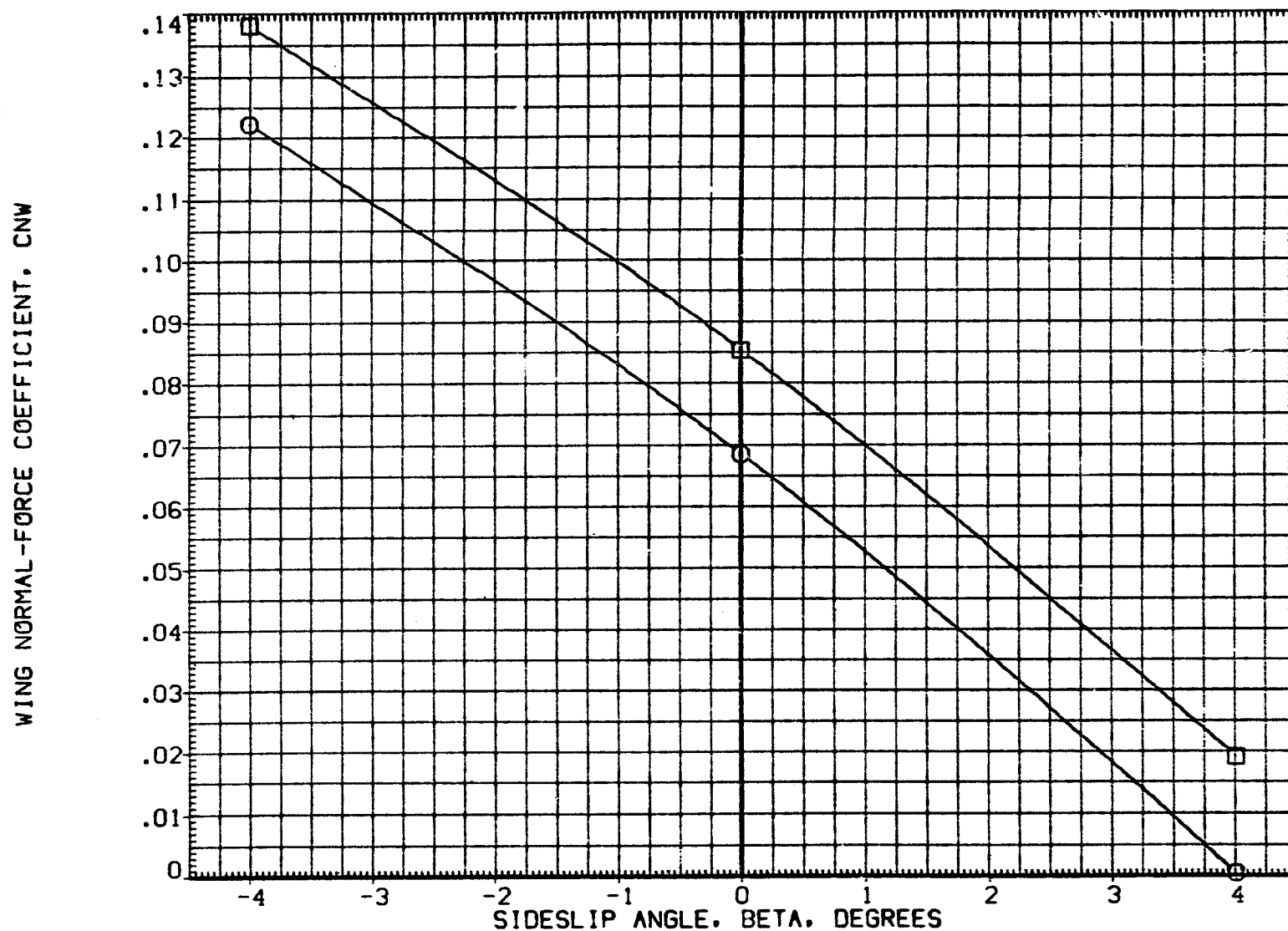


FIG. 17 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25 PLUMES OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4YA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y7B)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

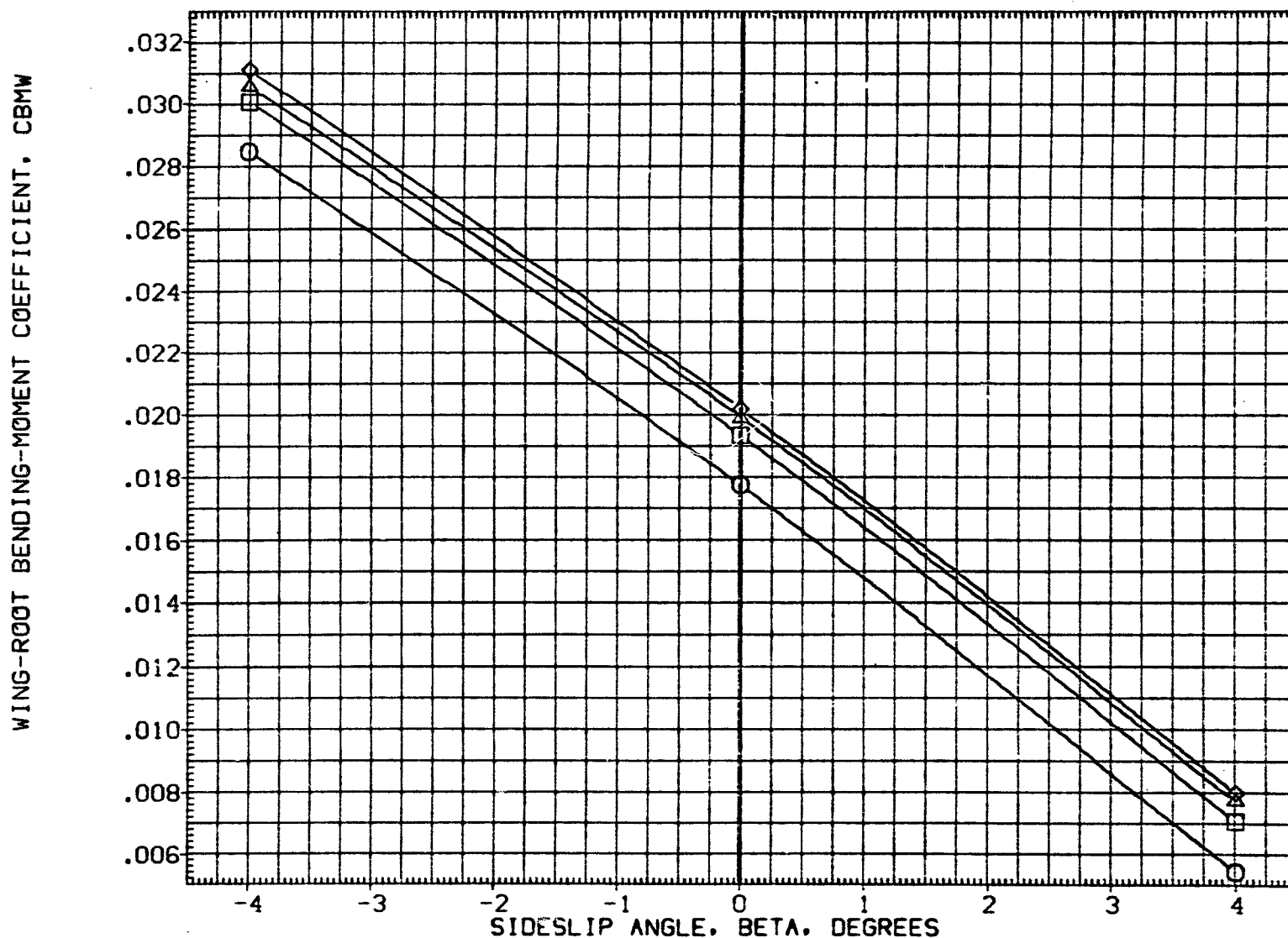


FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4 PLUMES OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4YA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

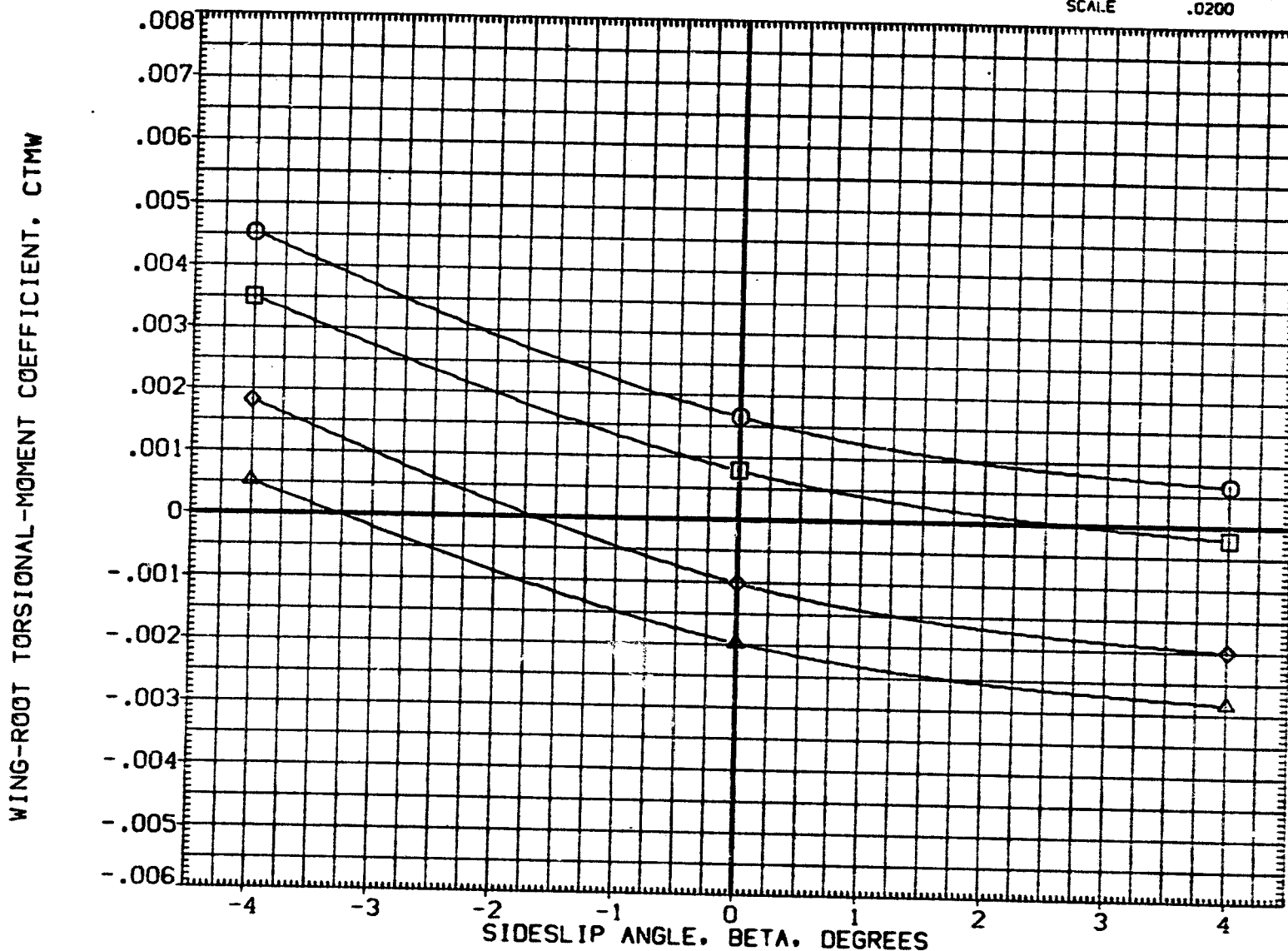


FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
(A) ALPHA = .00

PLUMES OFF

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4YA4)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y94)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y78)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

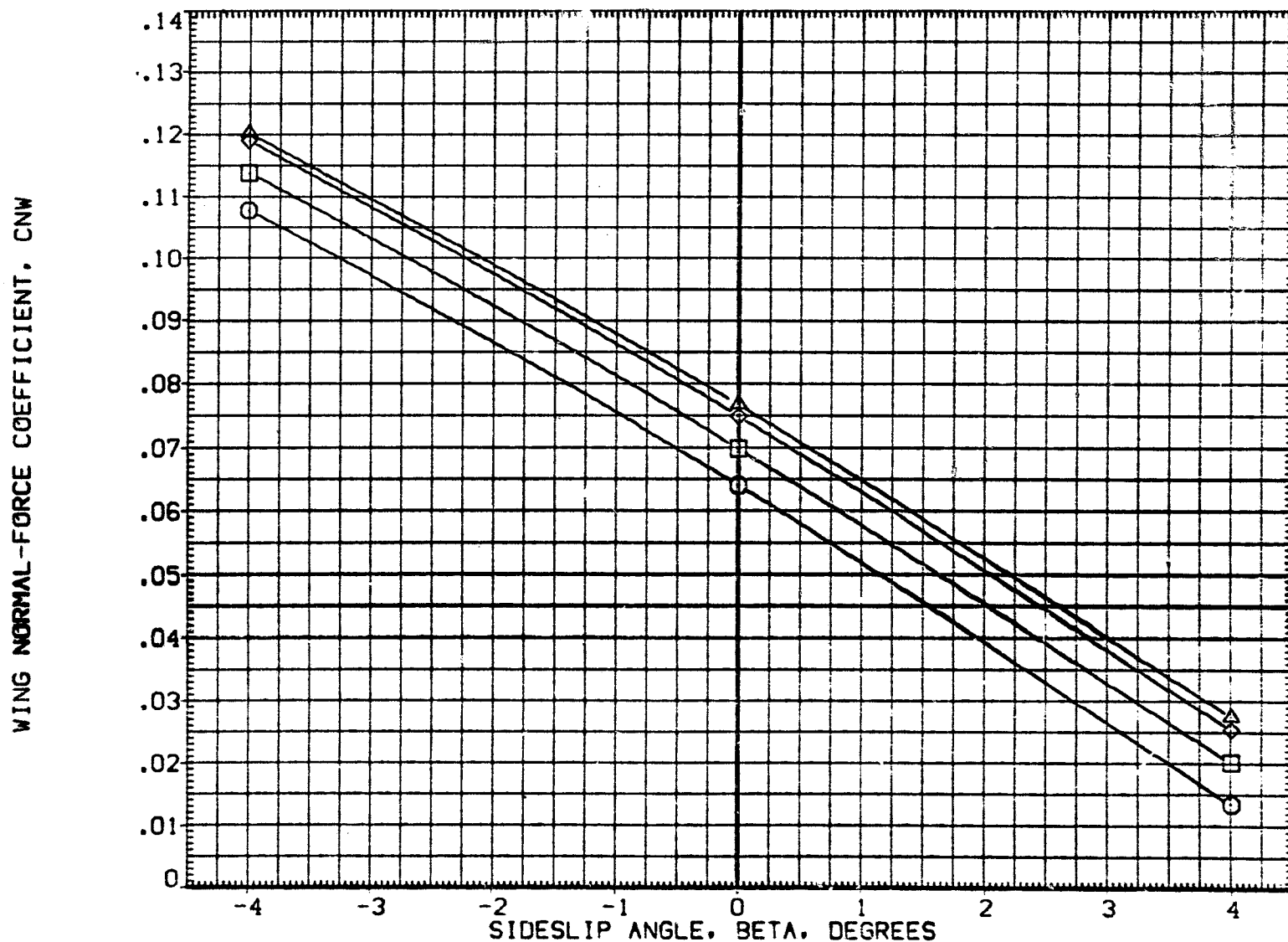


FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 50.FT.
(RE4Y57)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y68)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

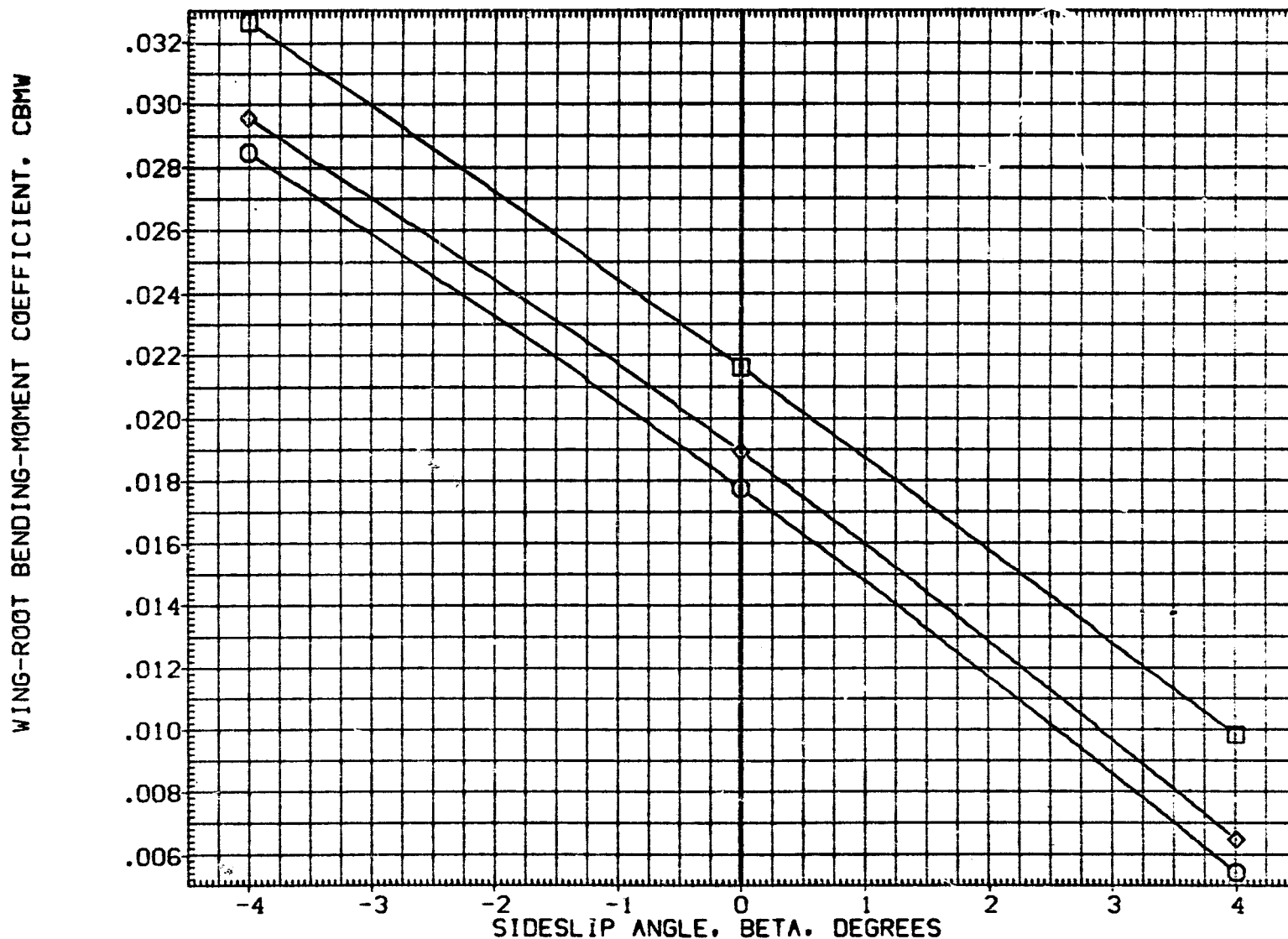


FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y57)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y68)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

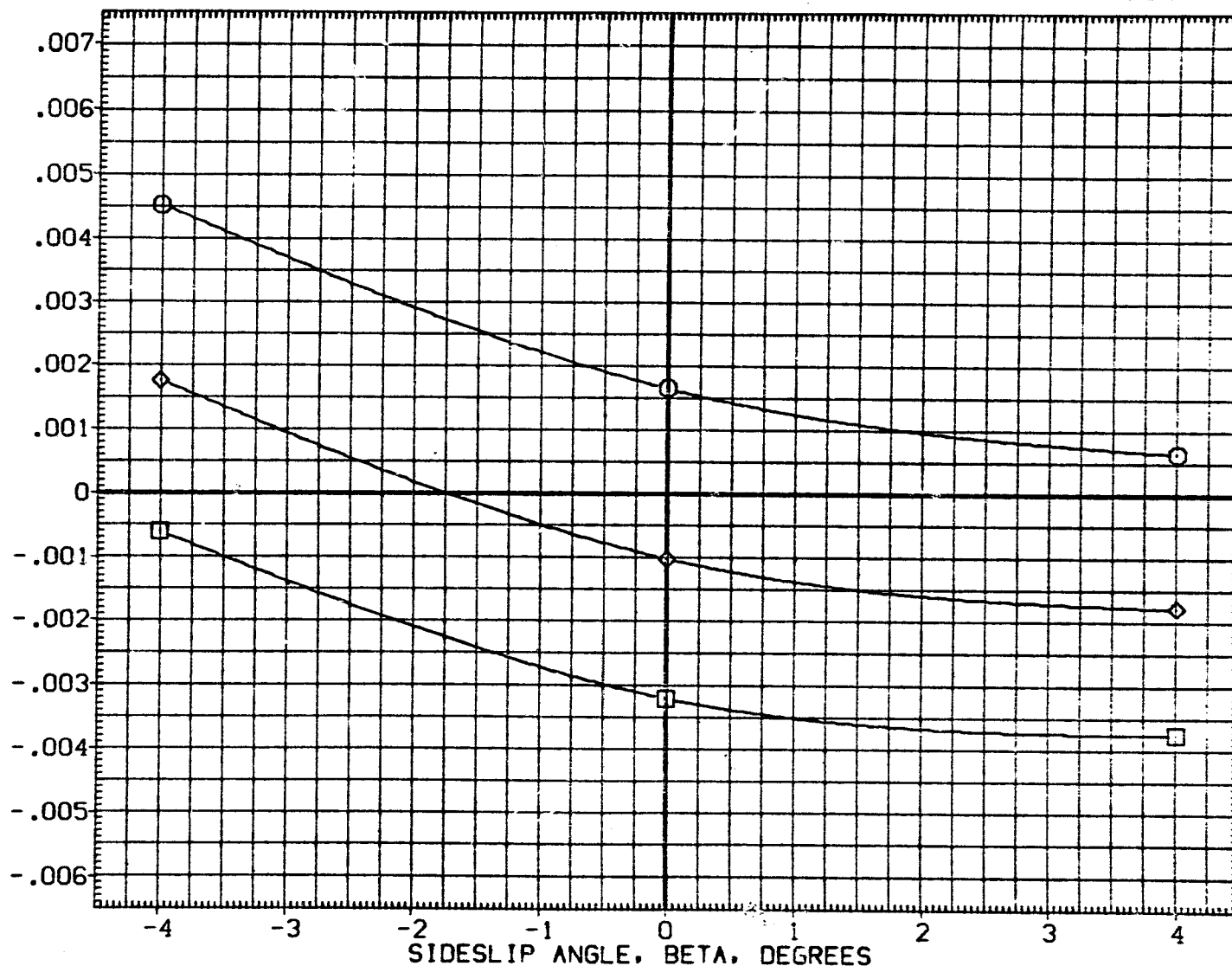


FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4

(A) ALPHA = .00

PLUMES OFF

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y57) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y68) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

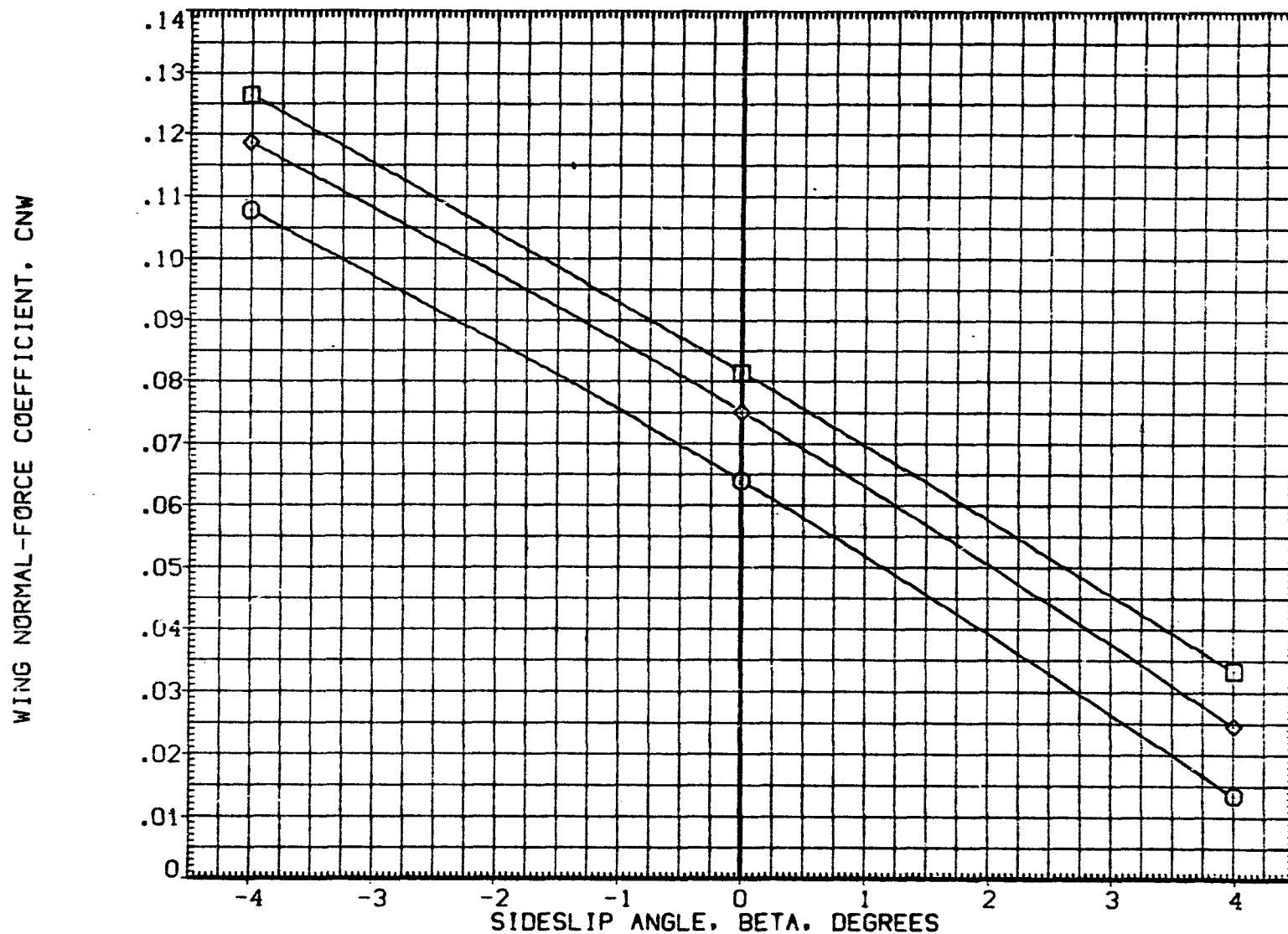


FIG. 18 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4

PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4YA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

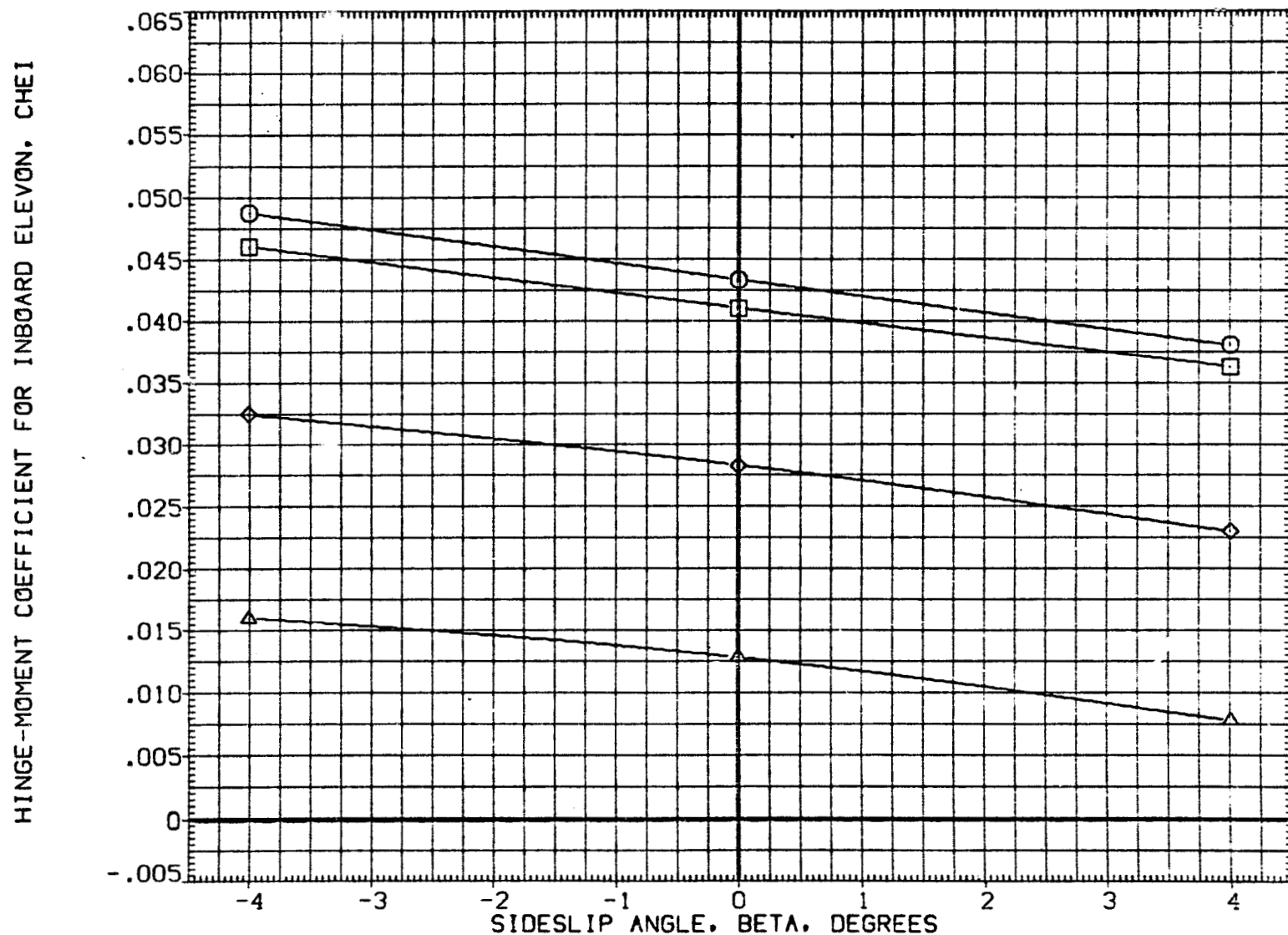


FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, $M=0.6$ PLUME OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SG.FT.
(RE4YA0) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y90) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y74) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

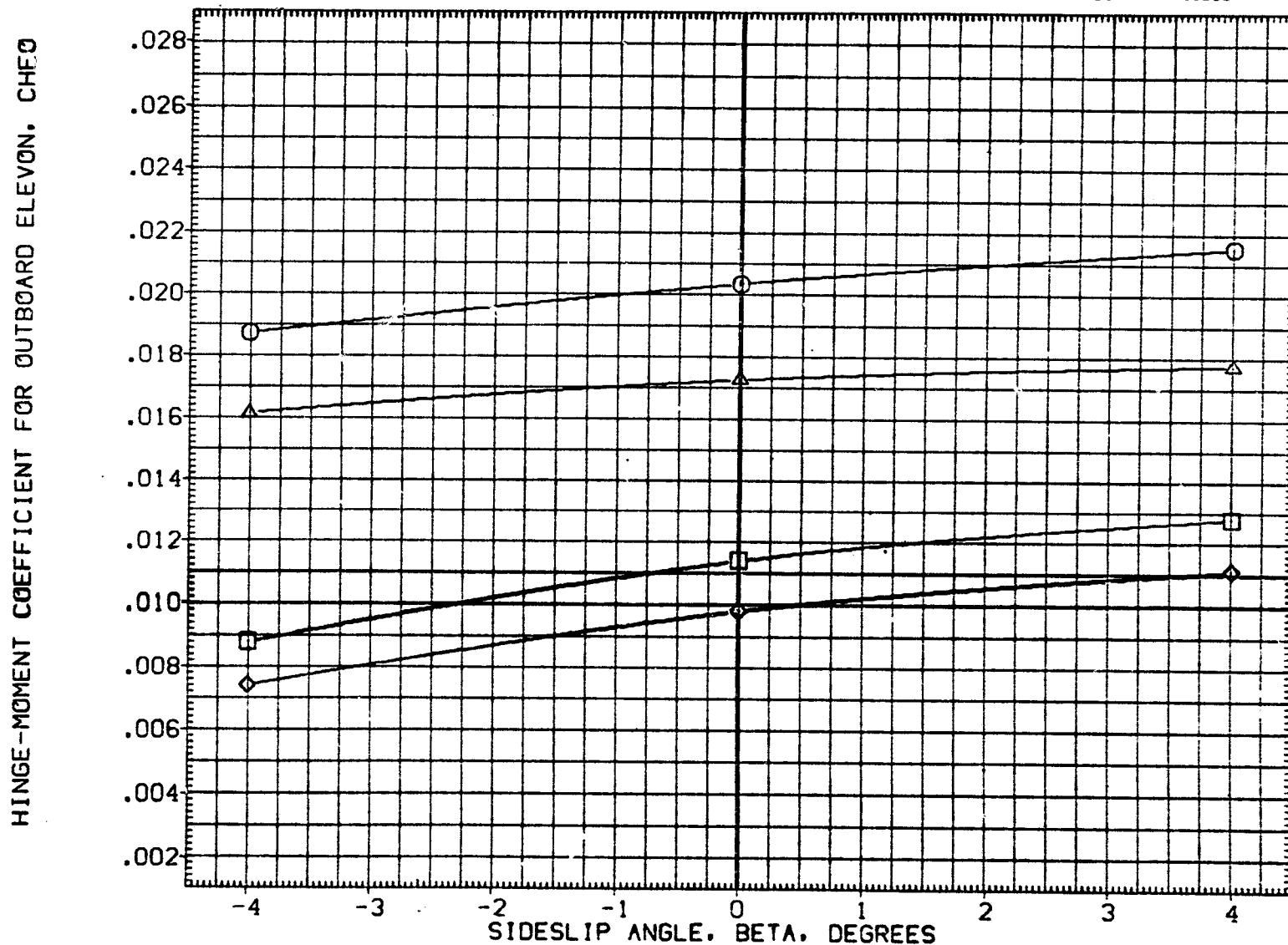


FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SO.FT.
(RE4Y84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

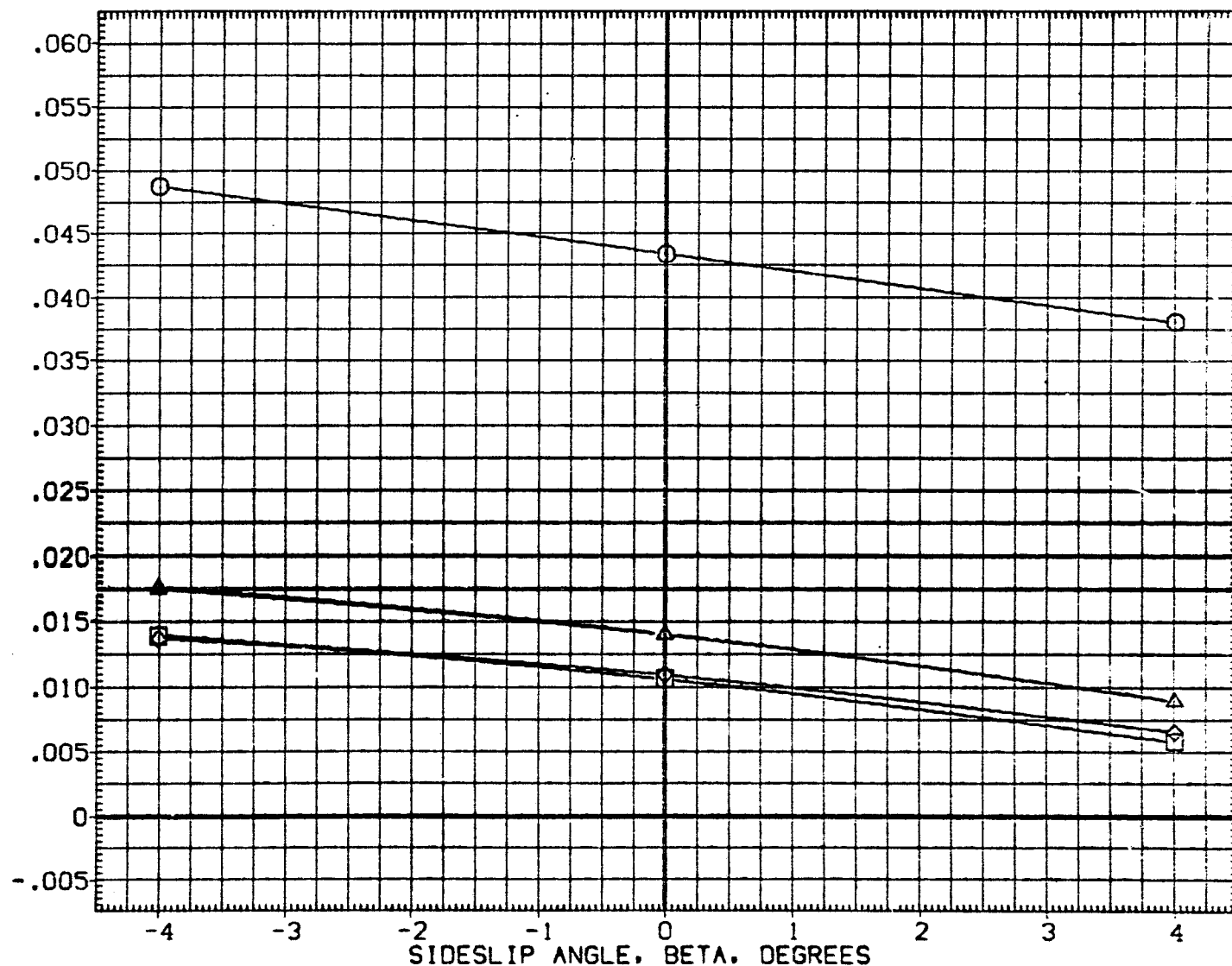


FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y84)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y53)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y64)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

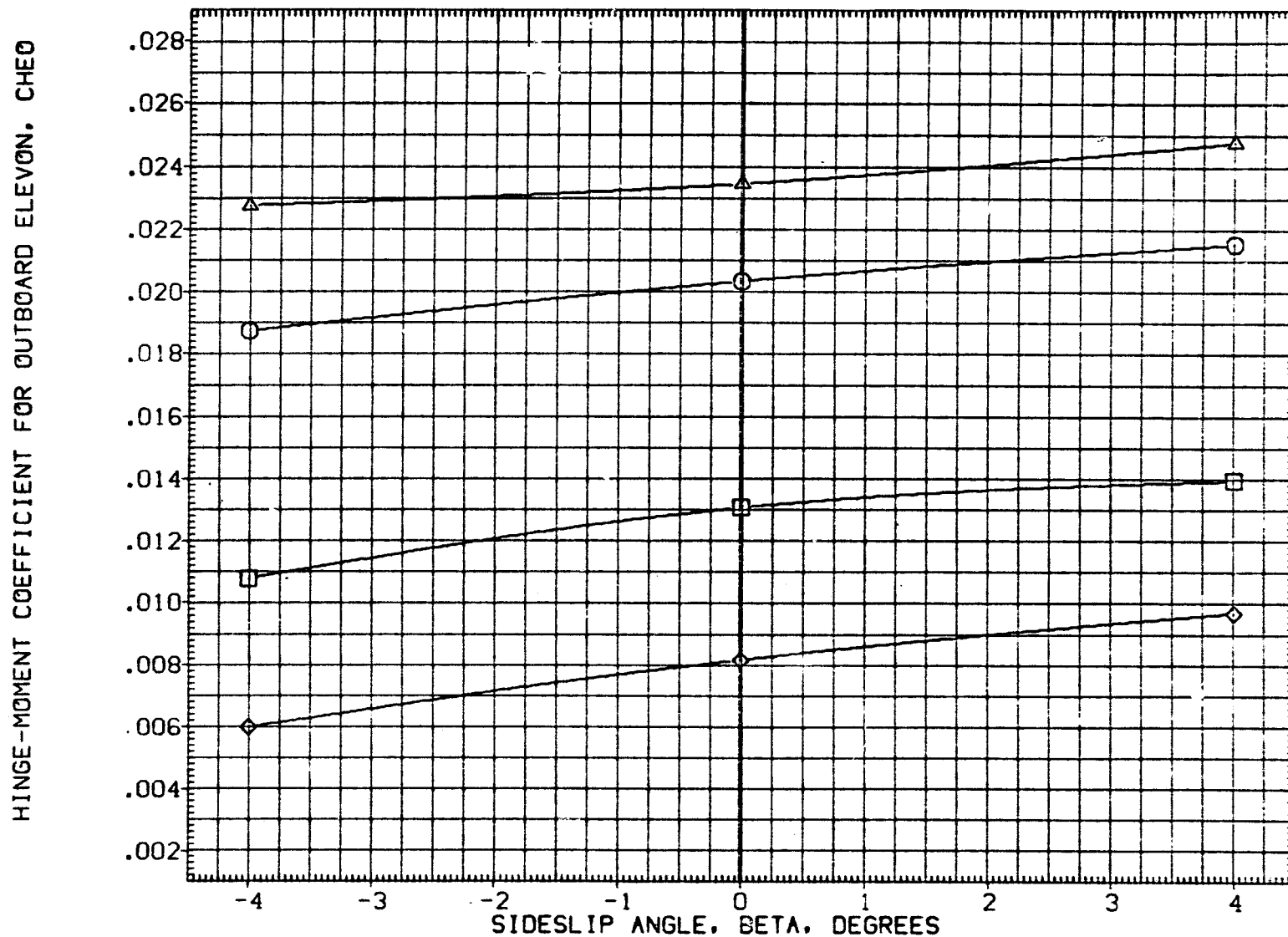


FIG. 19 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.6 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4YA1)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y91)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y75)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

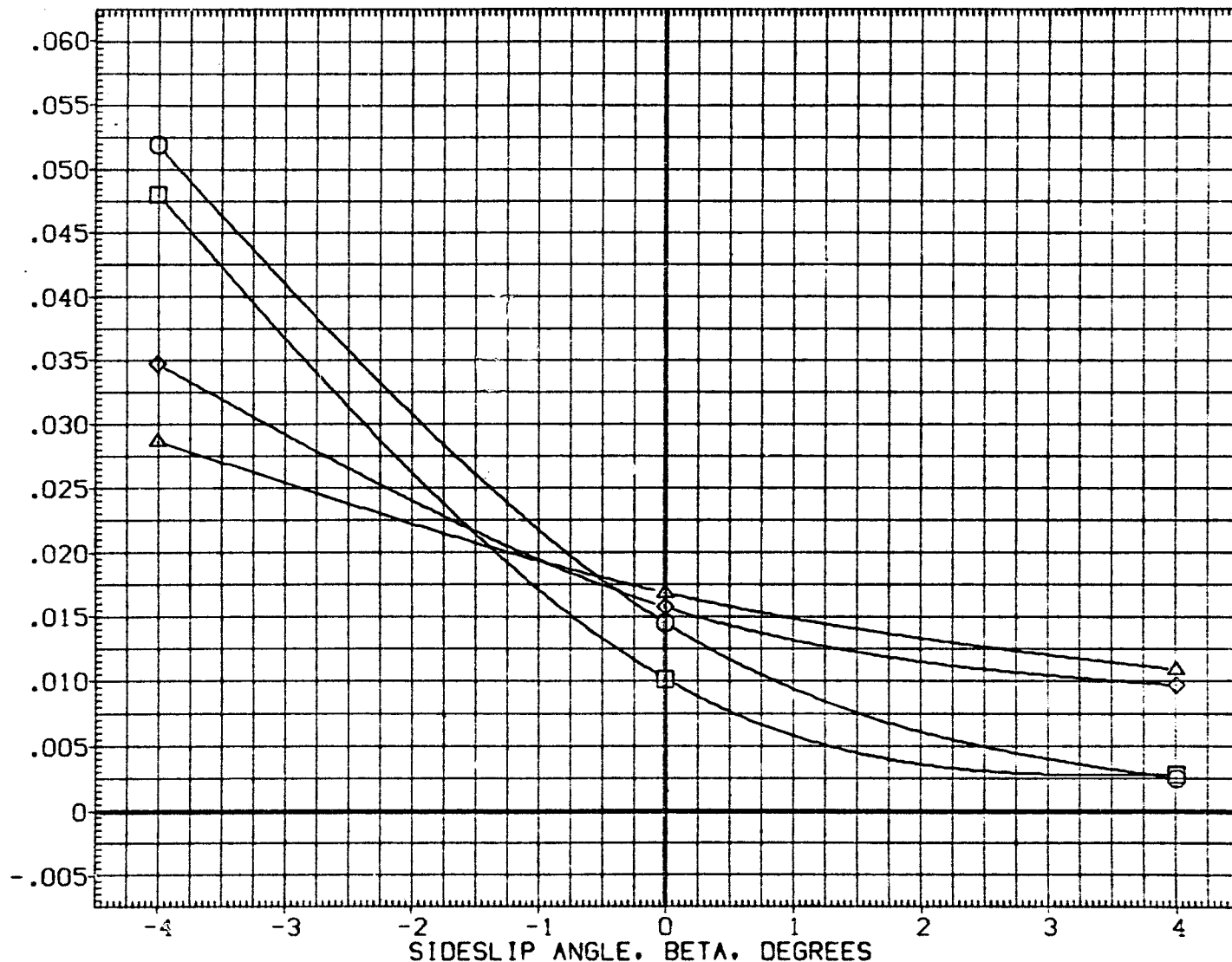


FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4YA1)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y91)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y75)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

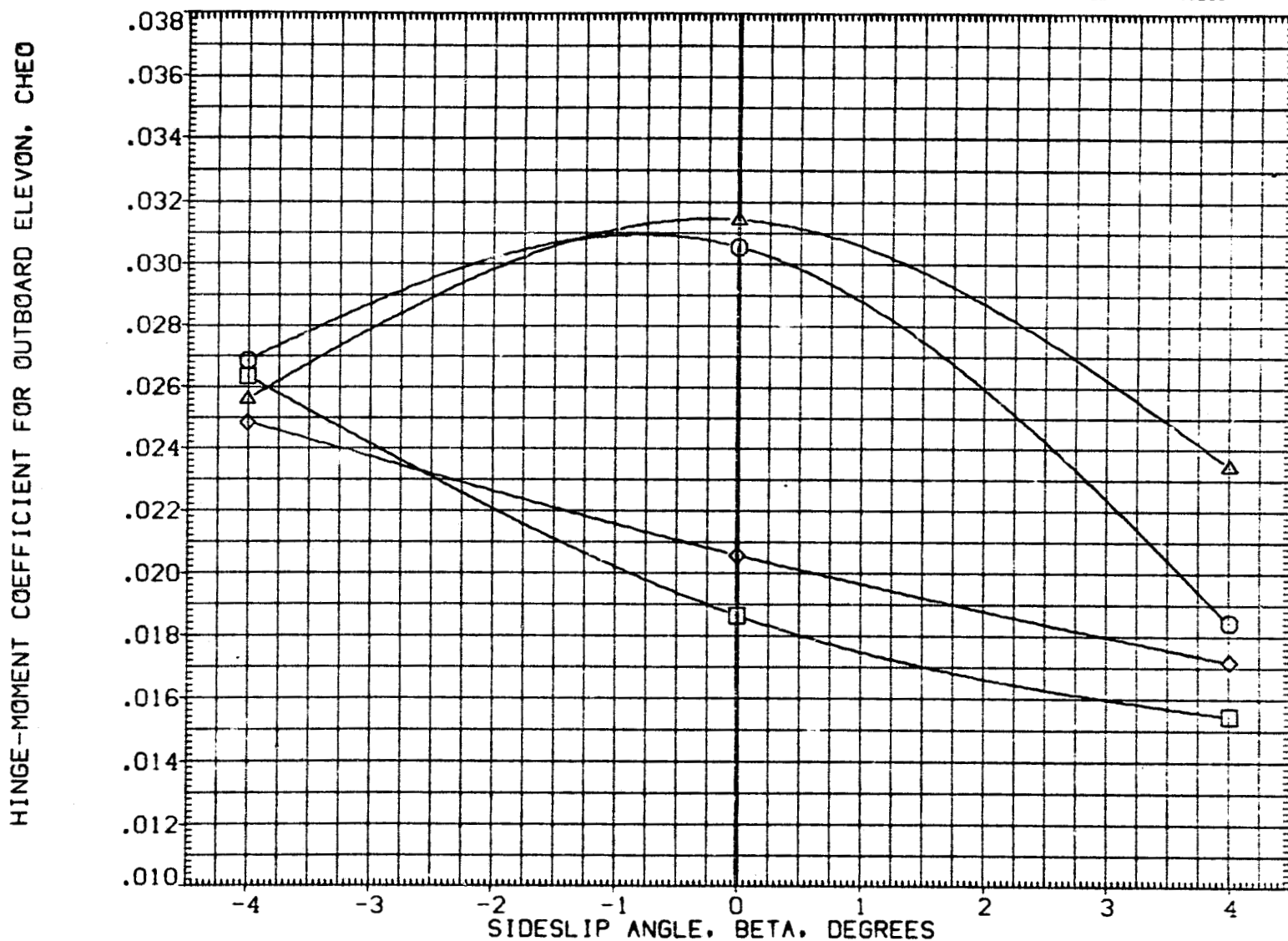


FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF
(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50 FT.
(RE4Y85)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y54)	△	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y65)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

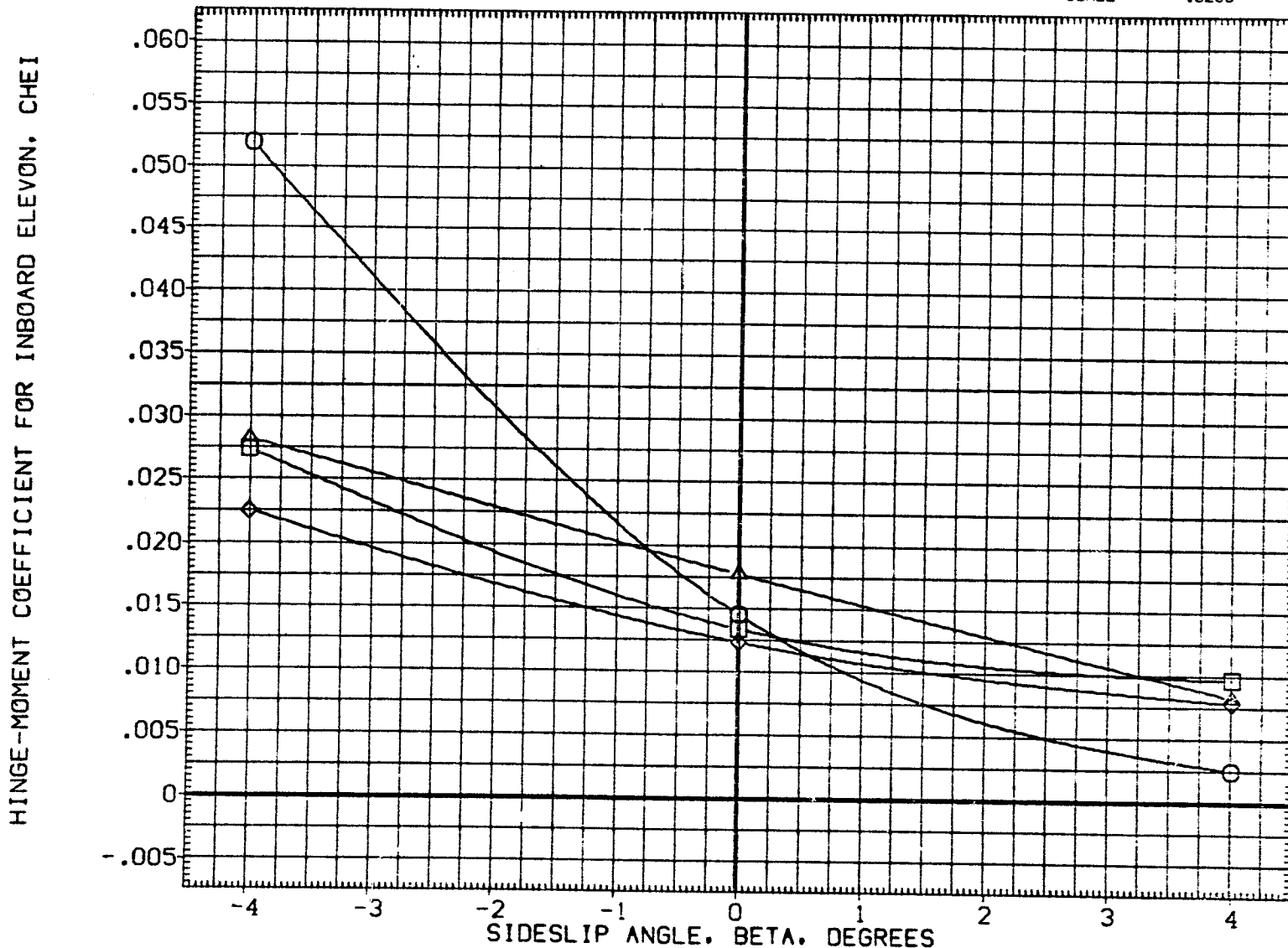


FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-88	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y85)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y54)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y65)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

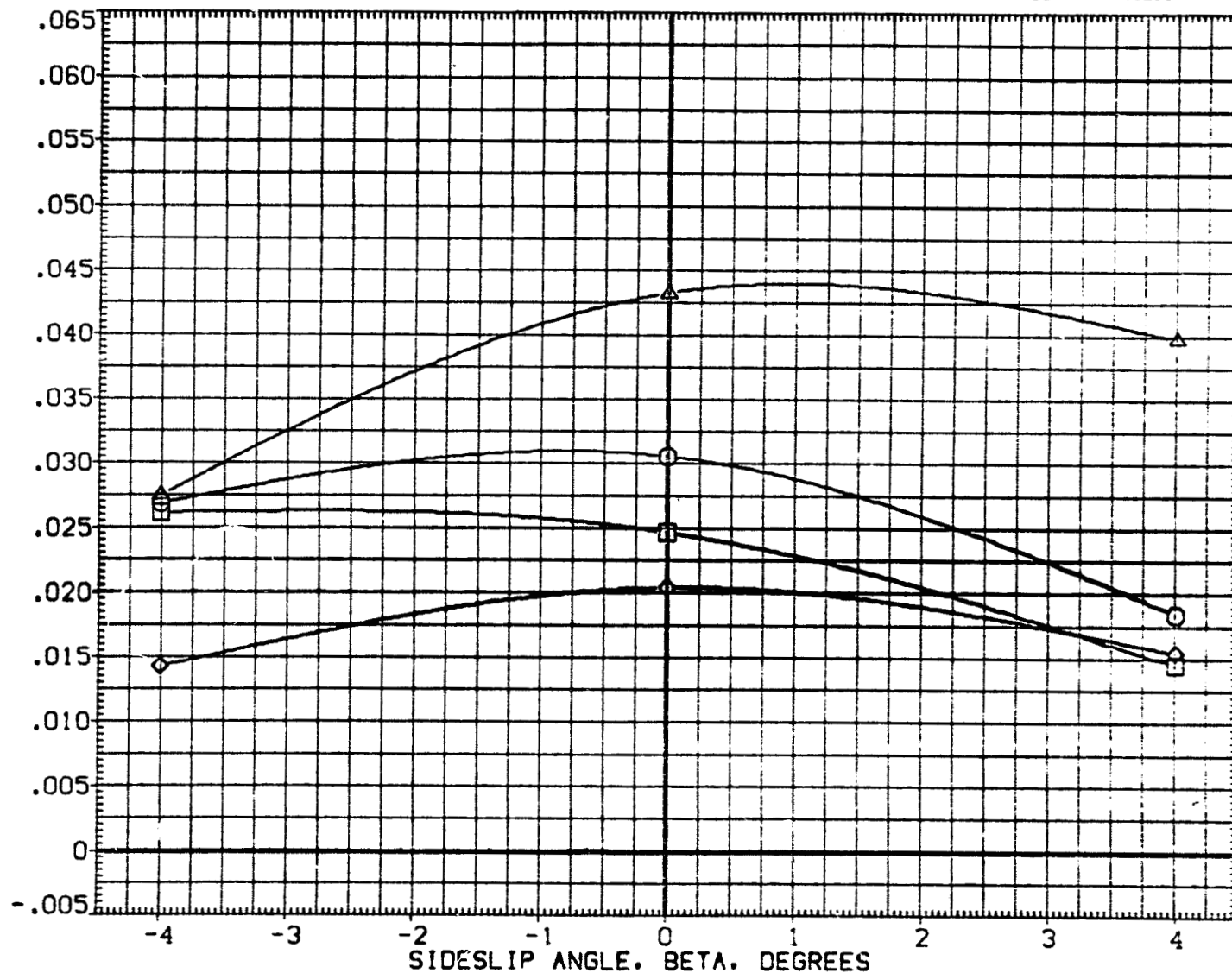


FIG. 20 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=0.9 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4YA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

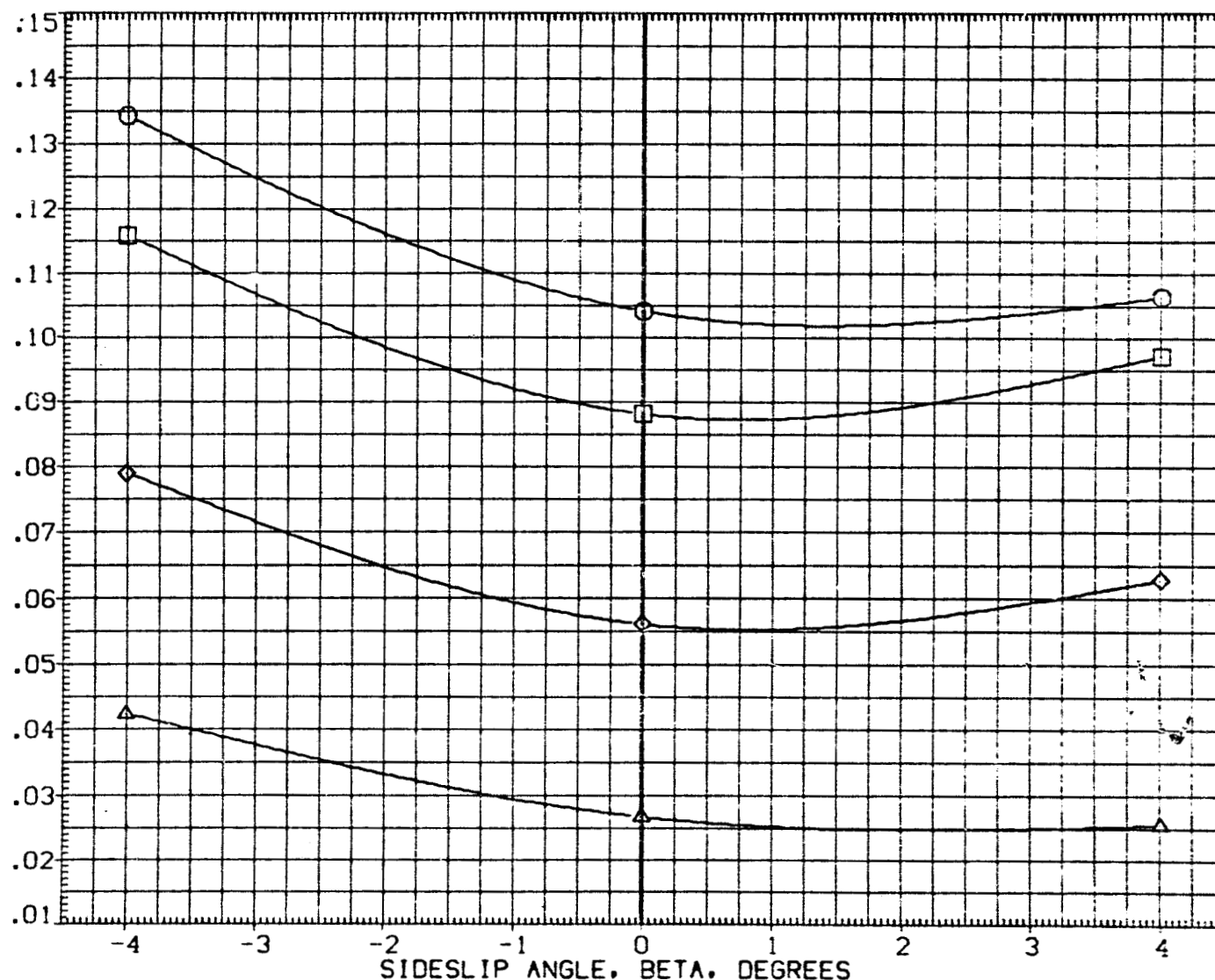


FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-16	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4YA2)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y92)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y76)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

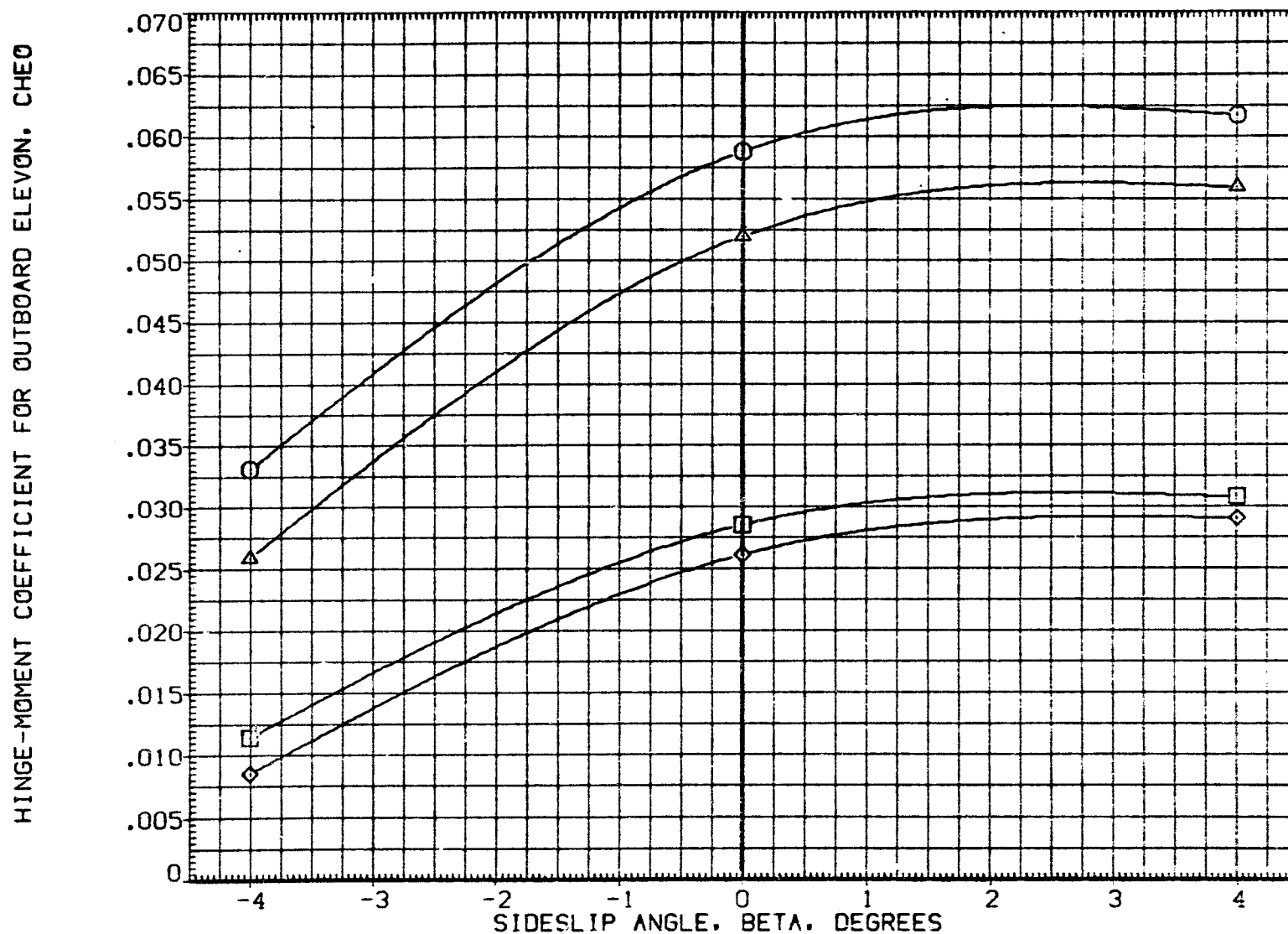


FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y06)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	3.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

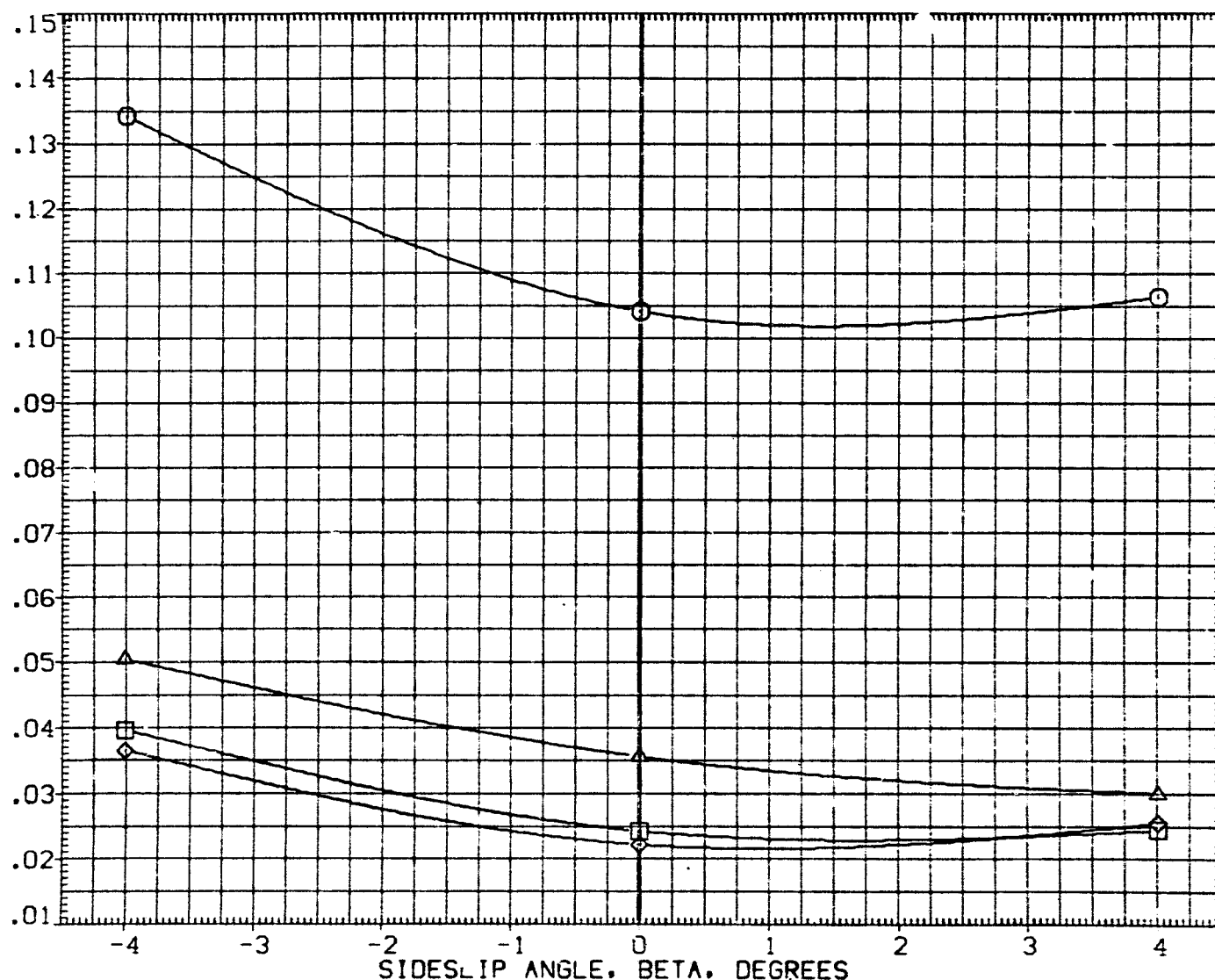


FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y86)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y55)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y66)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

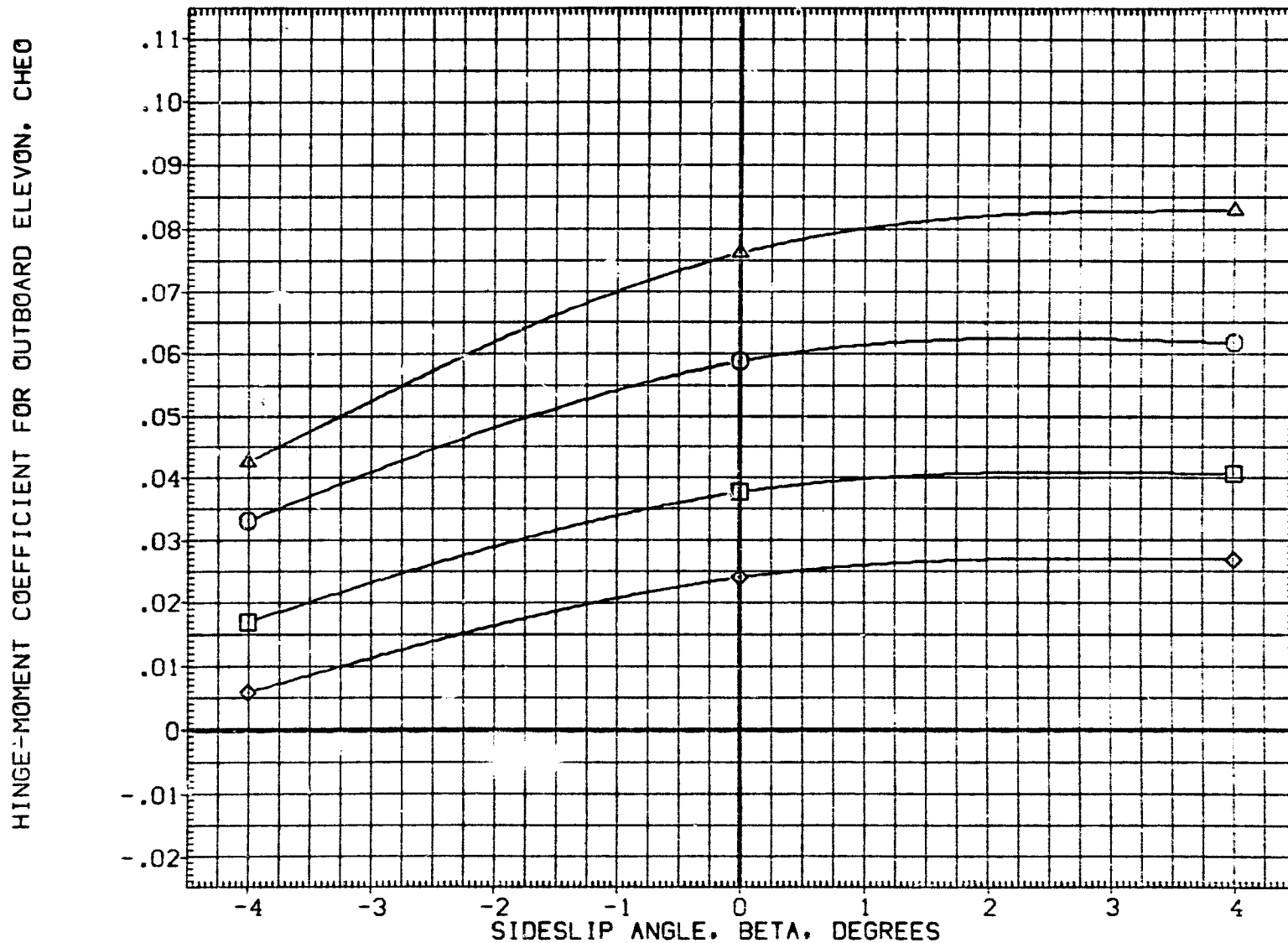


FIG. 21 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.1 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4YA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y77)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	50	XMHP	.0000 IN.
						YMHP	.0000 IN.
						ZMHP	.0000 IN.
						SCALE	.0200

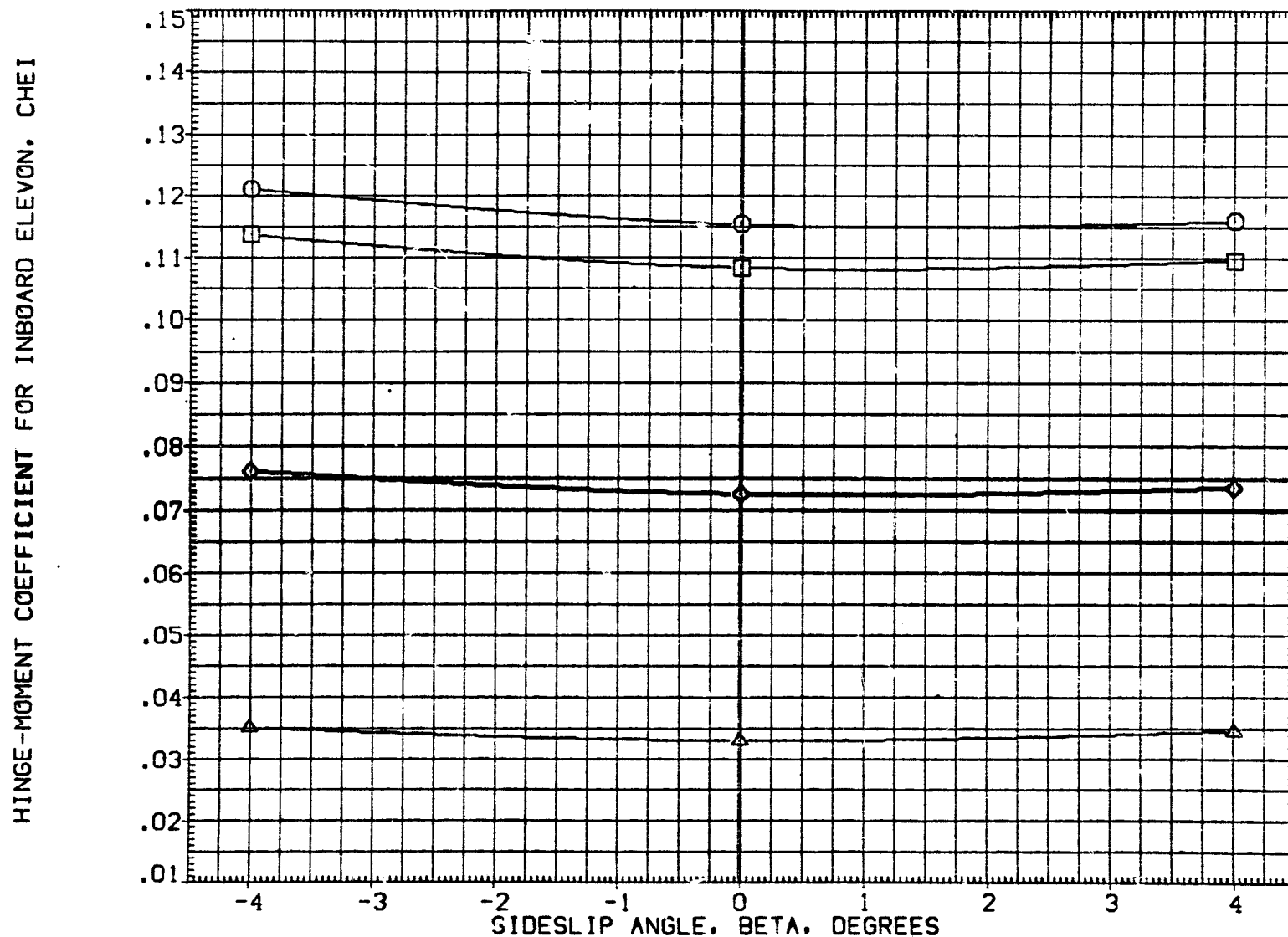


FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4YA3)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y93)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y77)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

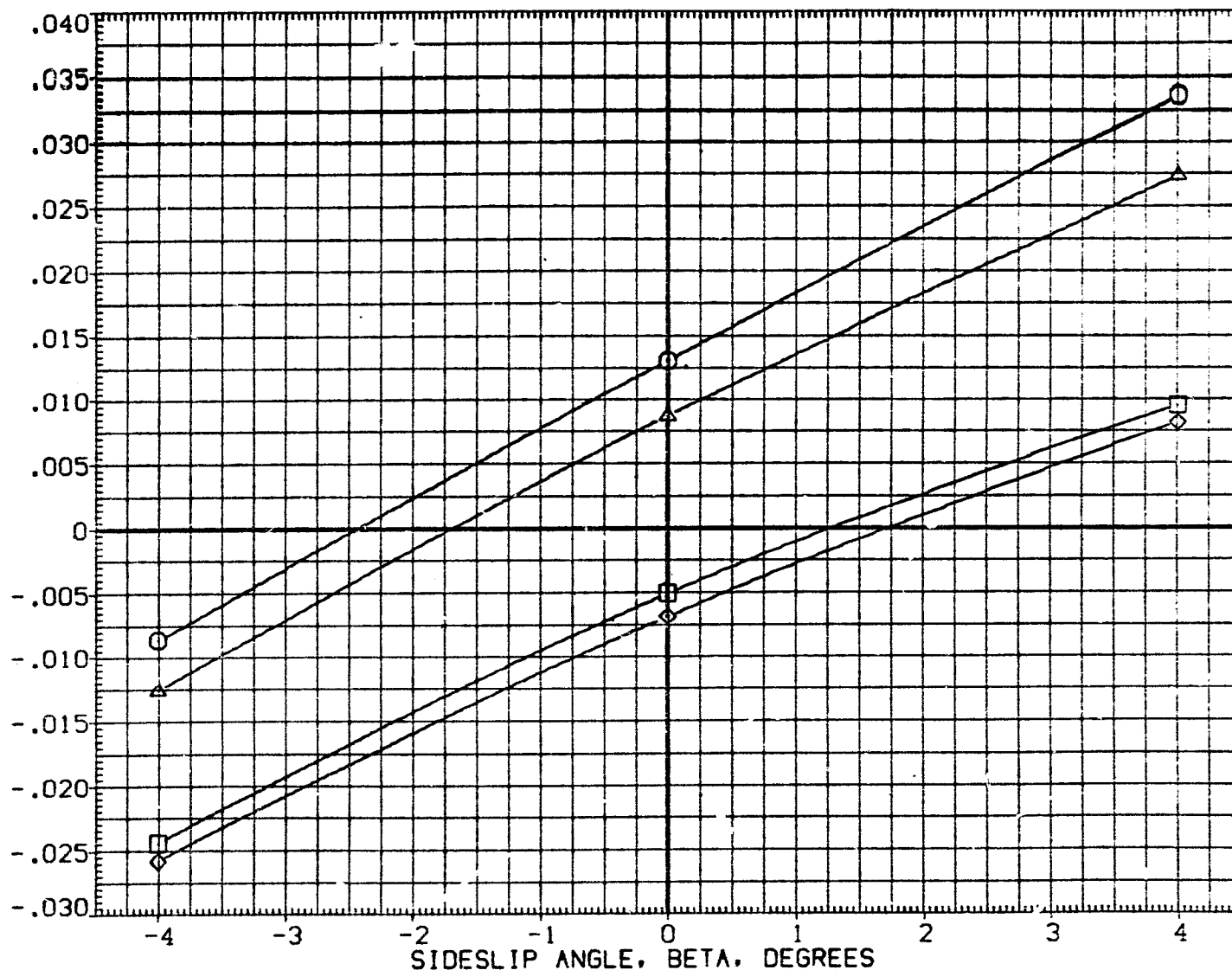


FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y56)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
						BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

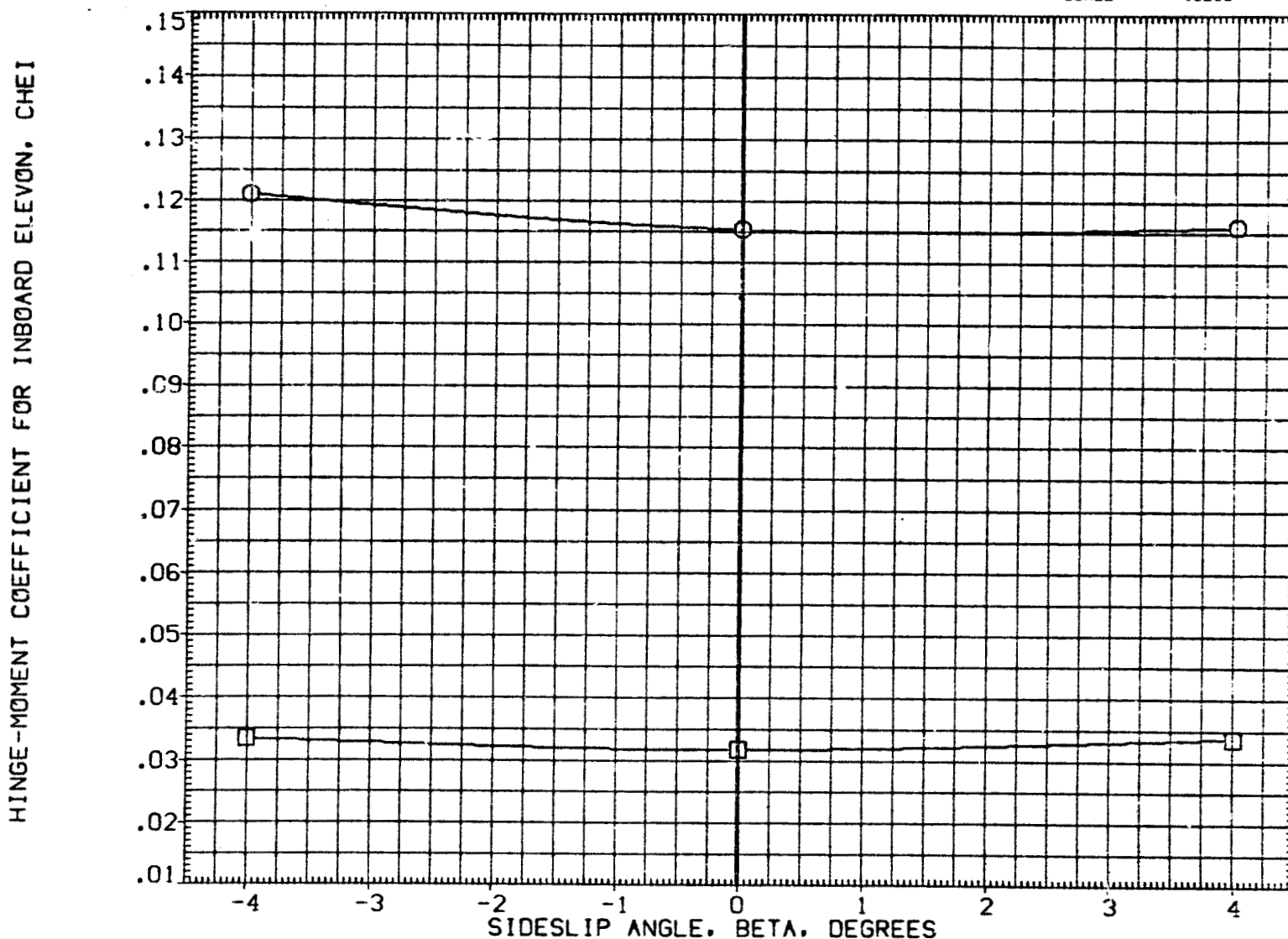


FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y56)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
						BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

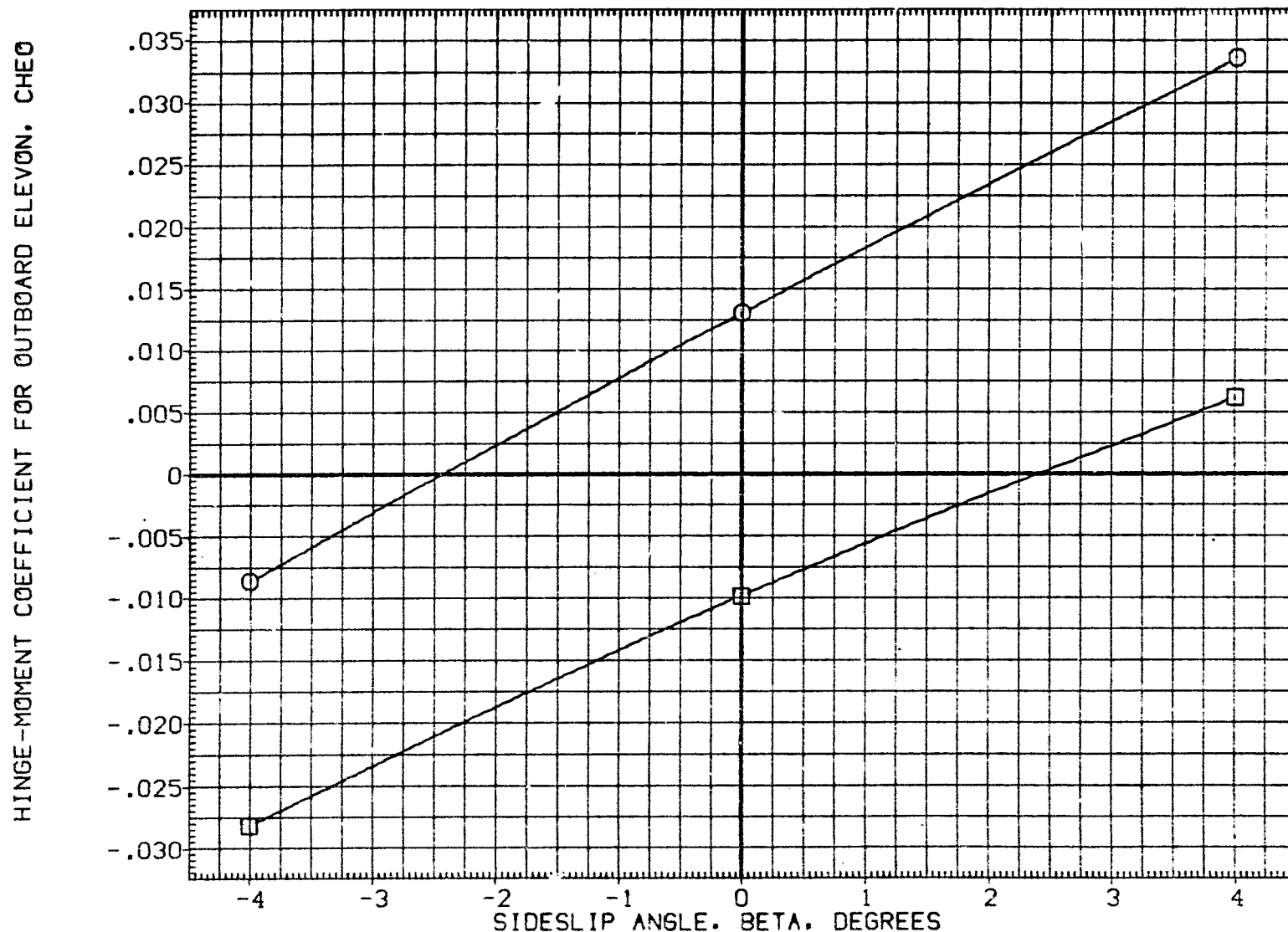


FIG. 22 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.25 PLUME OFF
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4YA4)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y94)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y78)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

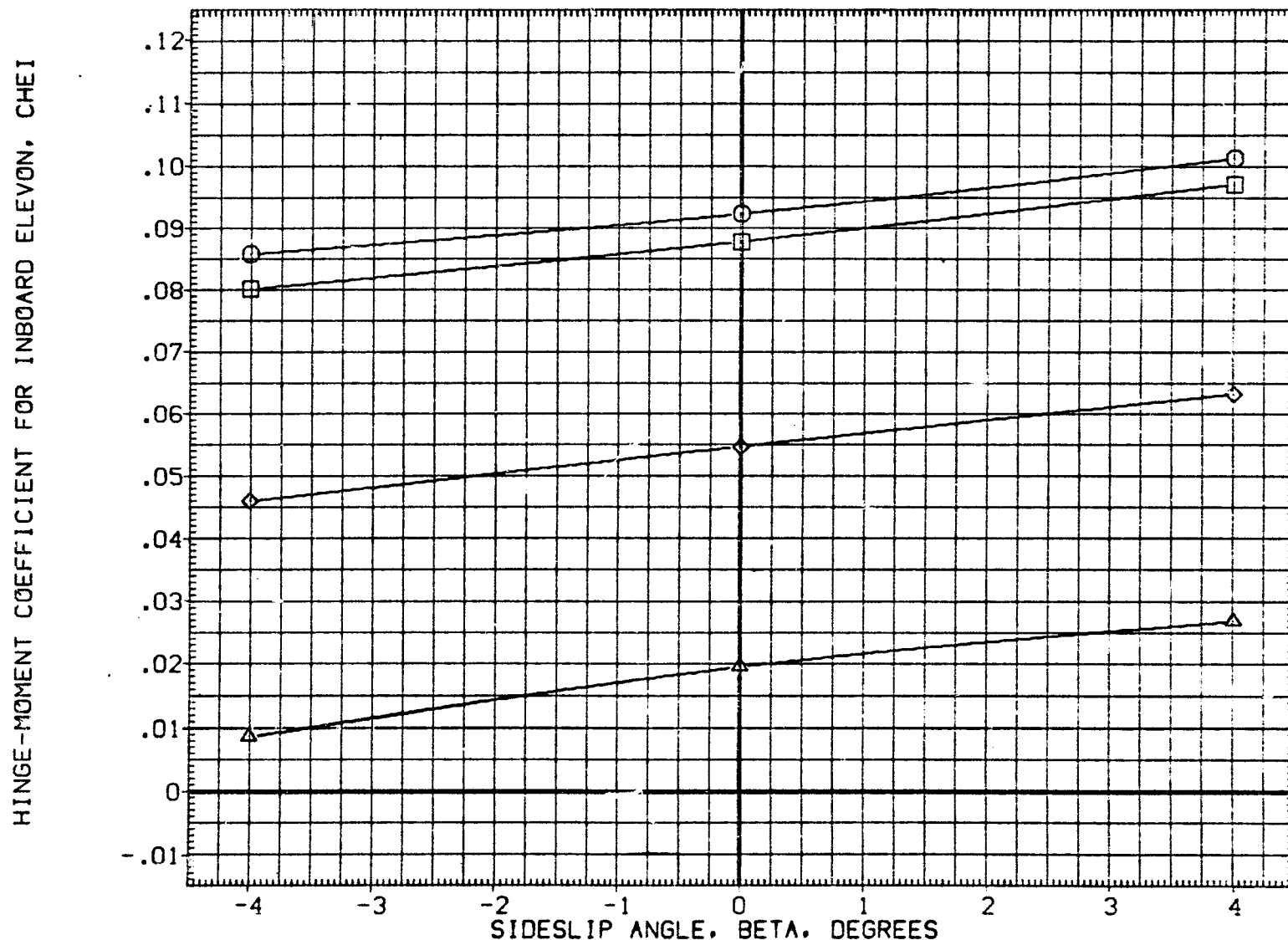


FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4YA4) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y94) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y78) △	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

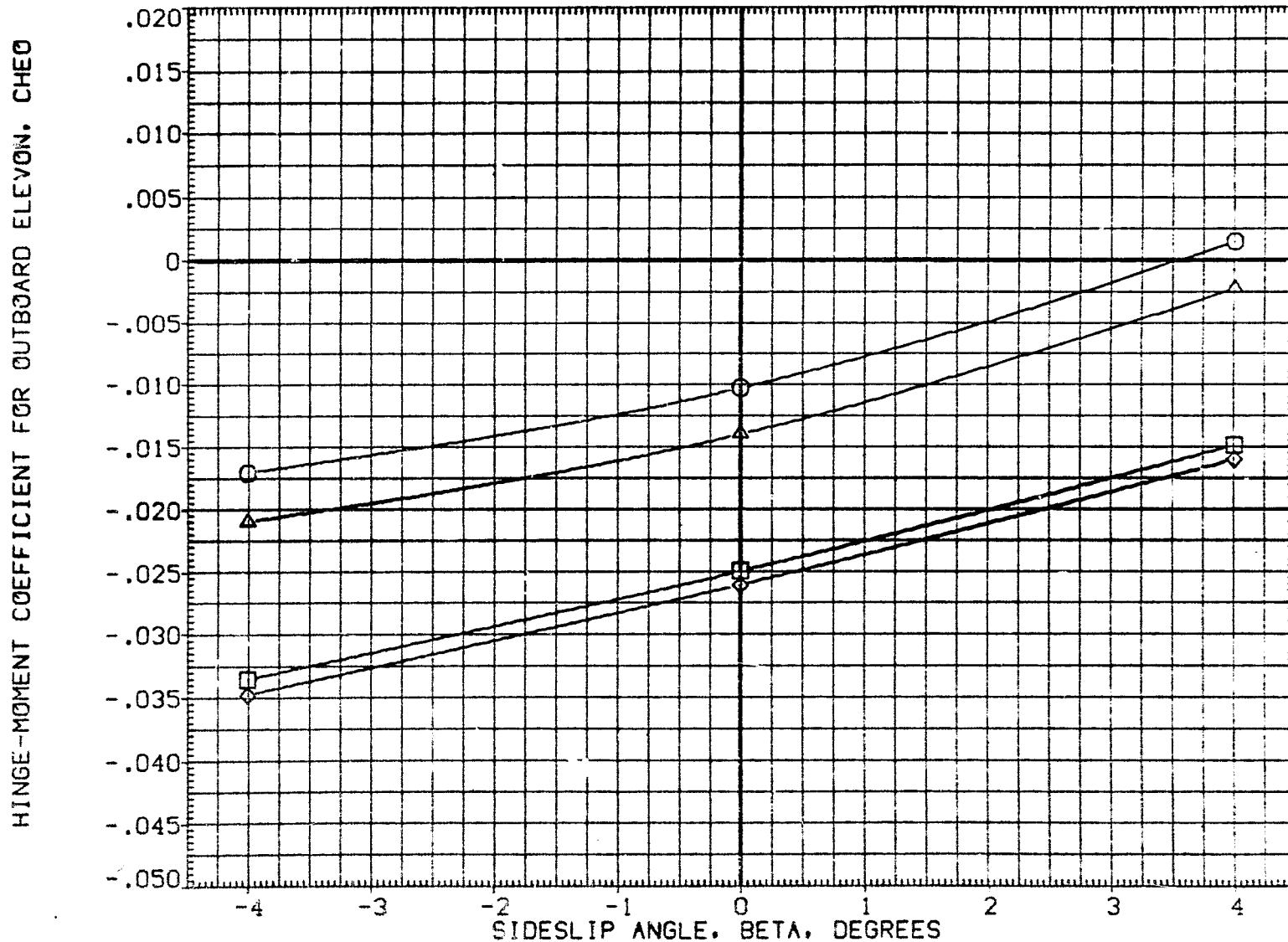


FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y57)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y68)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

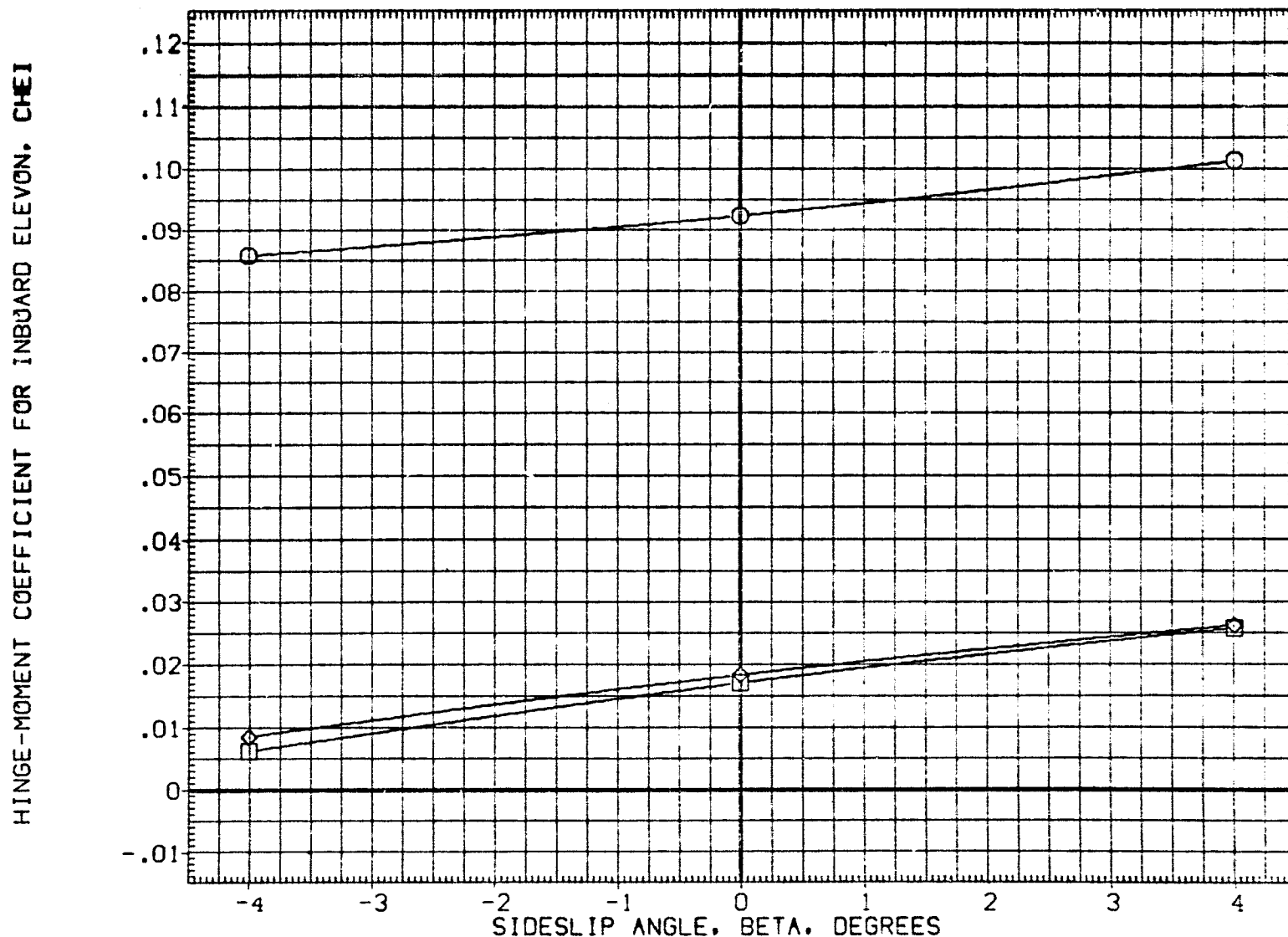


FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1AB0 0TS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y57)	ARC 11-023 1AB0 0TS (SRB OFF) (SSME OFF)	8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y68)	ARC 11-023 1AB0 0TS (SRB OFF) (SSME OFF)	8.000	-4.000	1.400	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

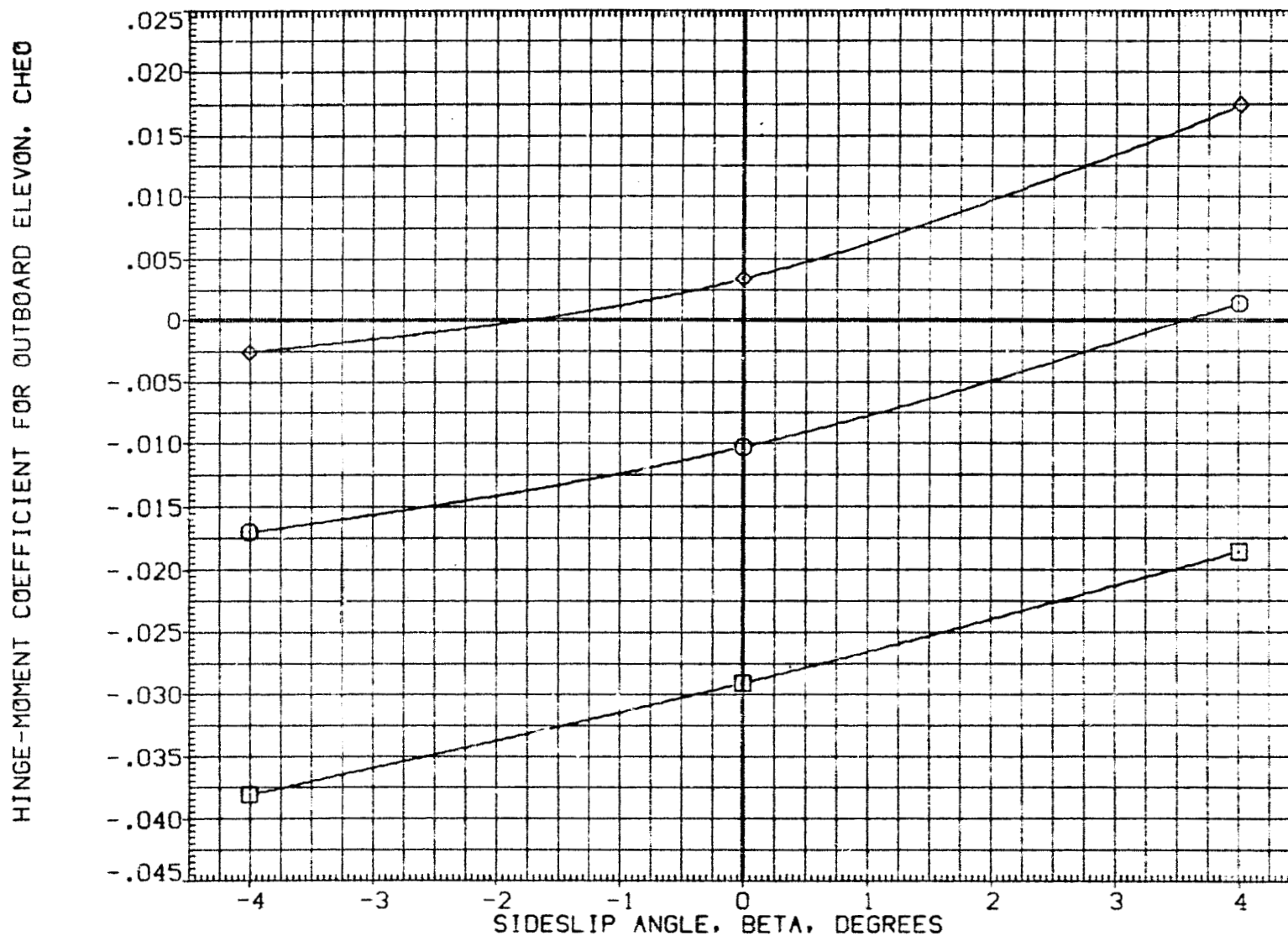


FIG. 23 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENT IN YAW, M=1.4 PLUME OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	ARC 11-023 1A80 CTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4XA5)	ARC 11-023 1A80 CTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4X95)	ARC 11-023 1A80 CTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X79)	ARC 11-023 1A80 CTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

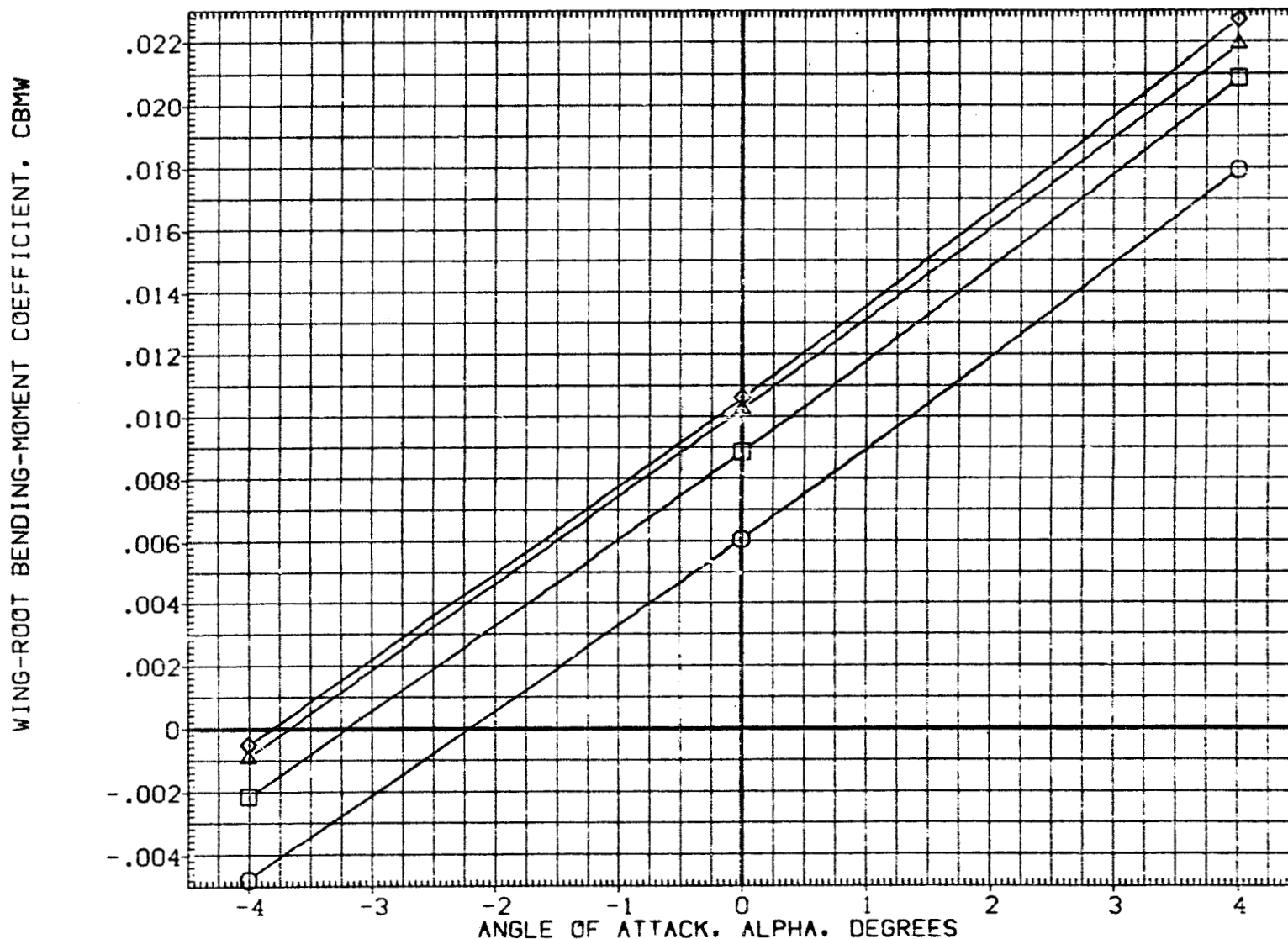


FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4XA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4X95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

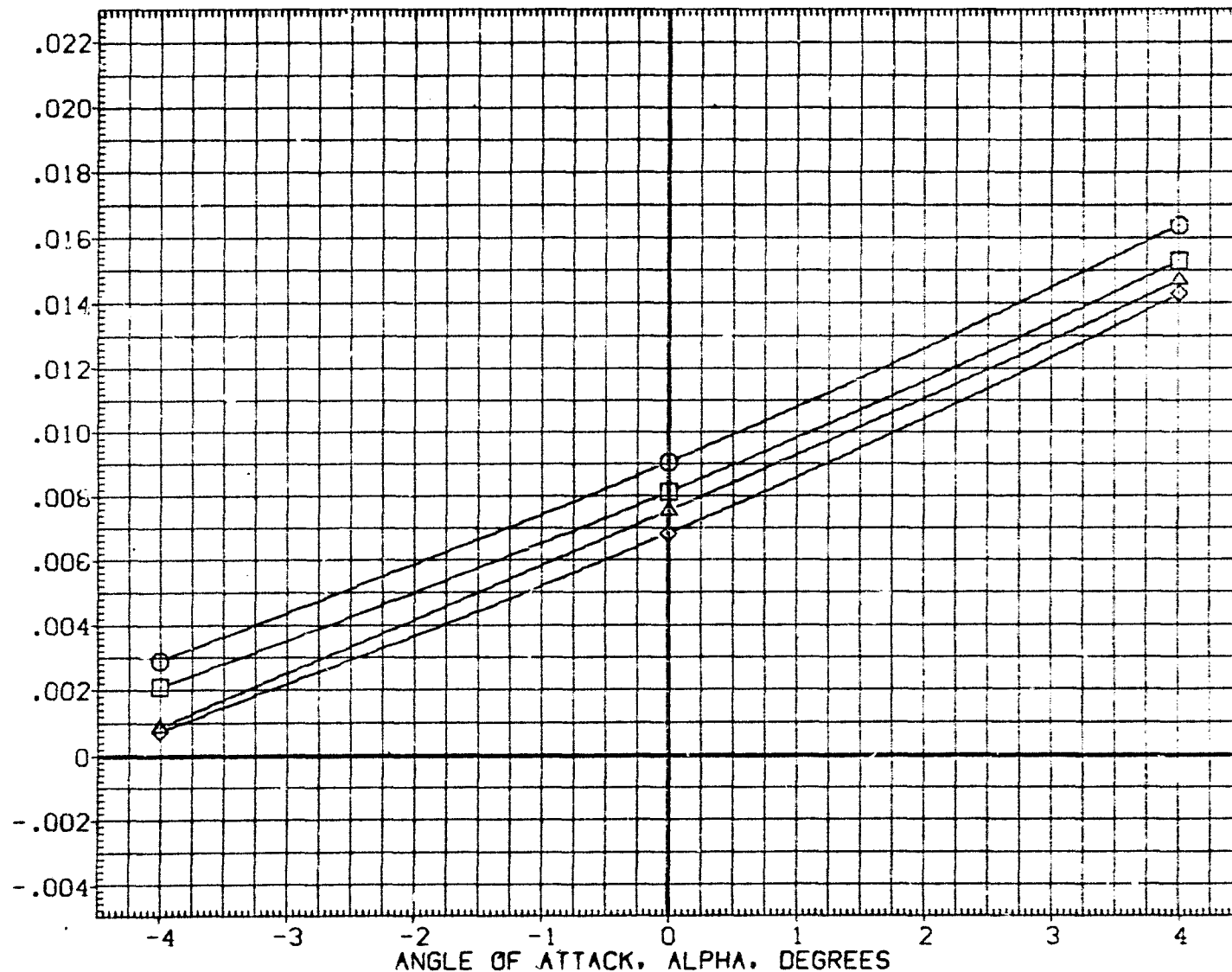


FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4XA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4X95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

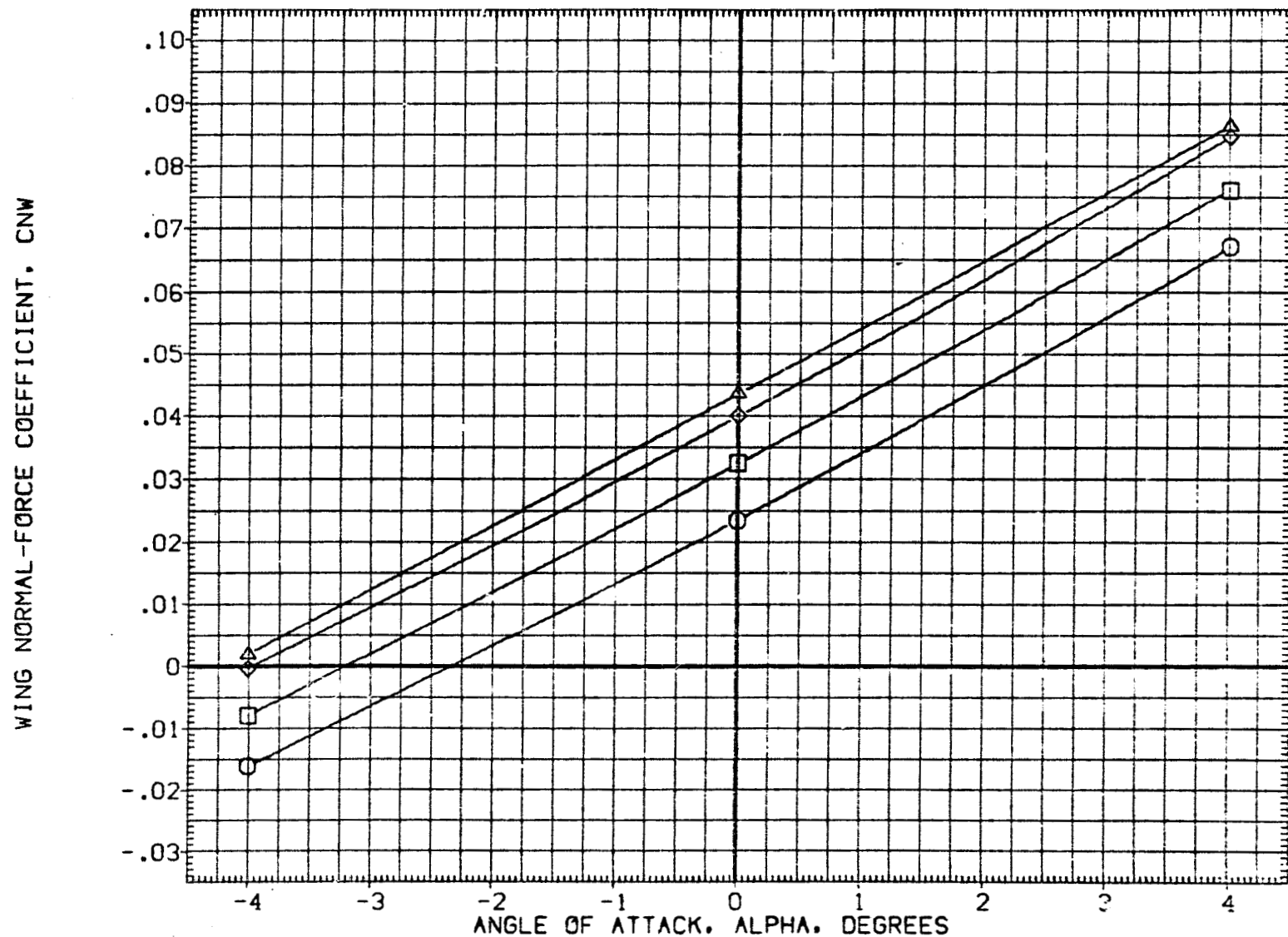


FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4X87)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4X58)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X69)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.430	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

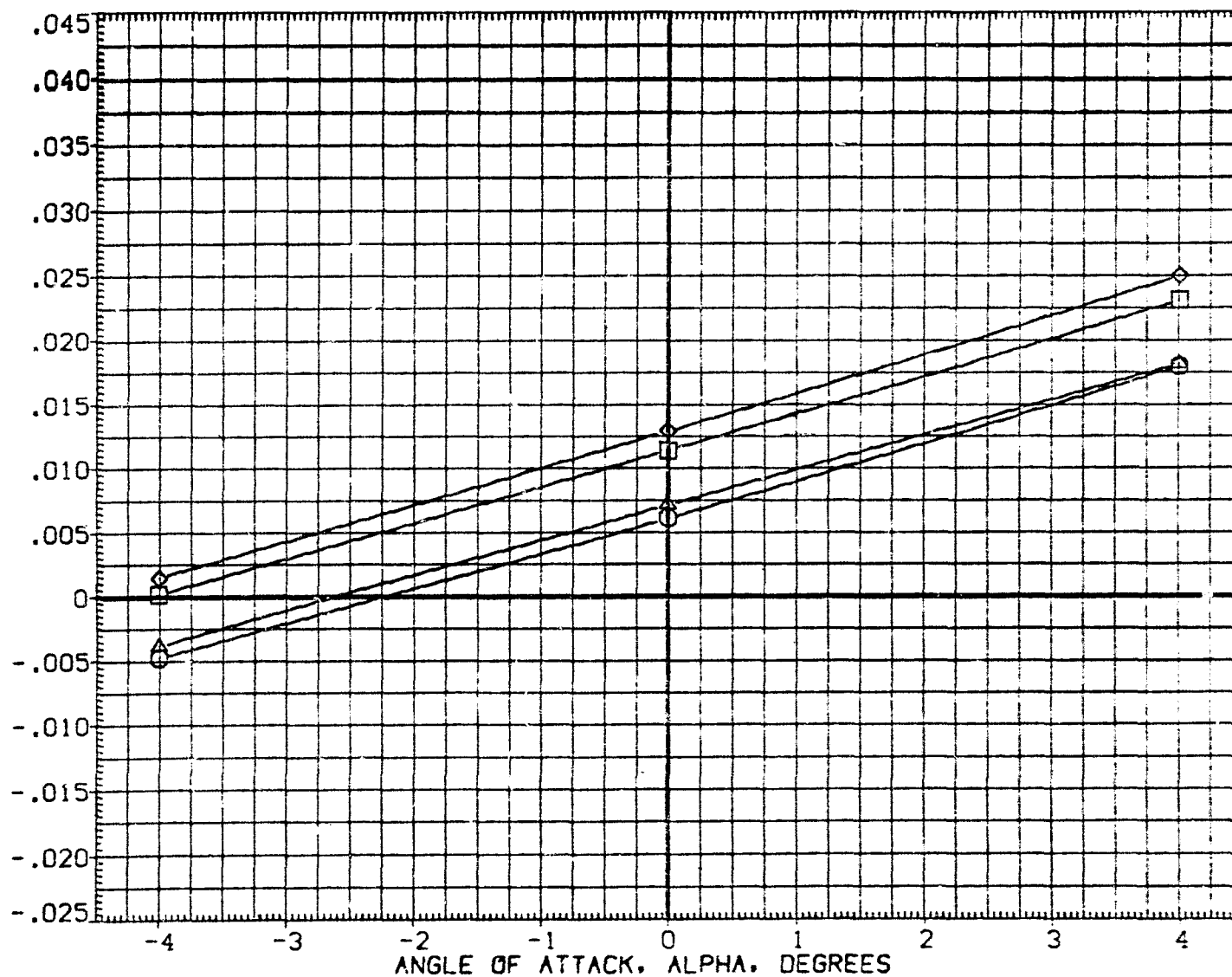


FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON
 (A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X20)	○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF 2650.0000 SQ.FT.
(RE4X87)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF 1290.3000 IN.
(RE4X58)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF 1290.3000 IN.
(RE4X69)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP .0000 IN.
							YMRP .0000 IN.
							ZMRP .0000 IN.
							SCALE .0200

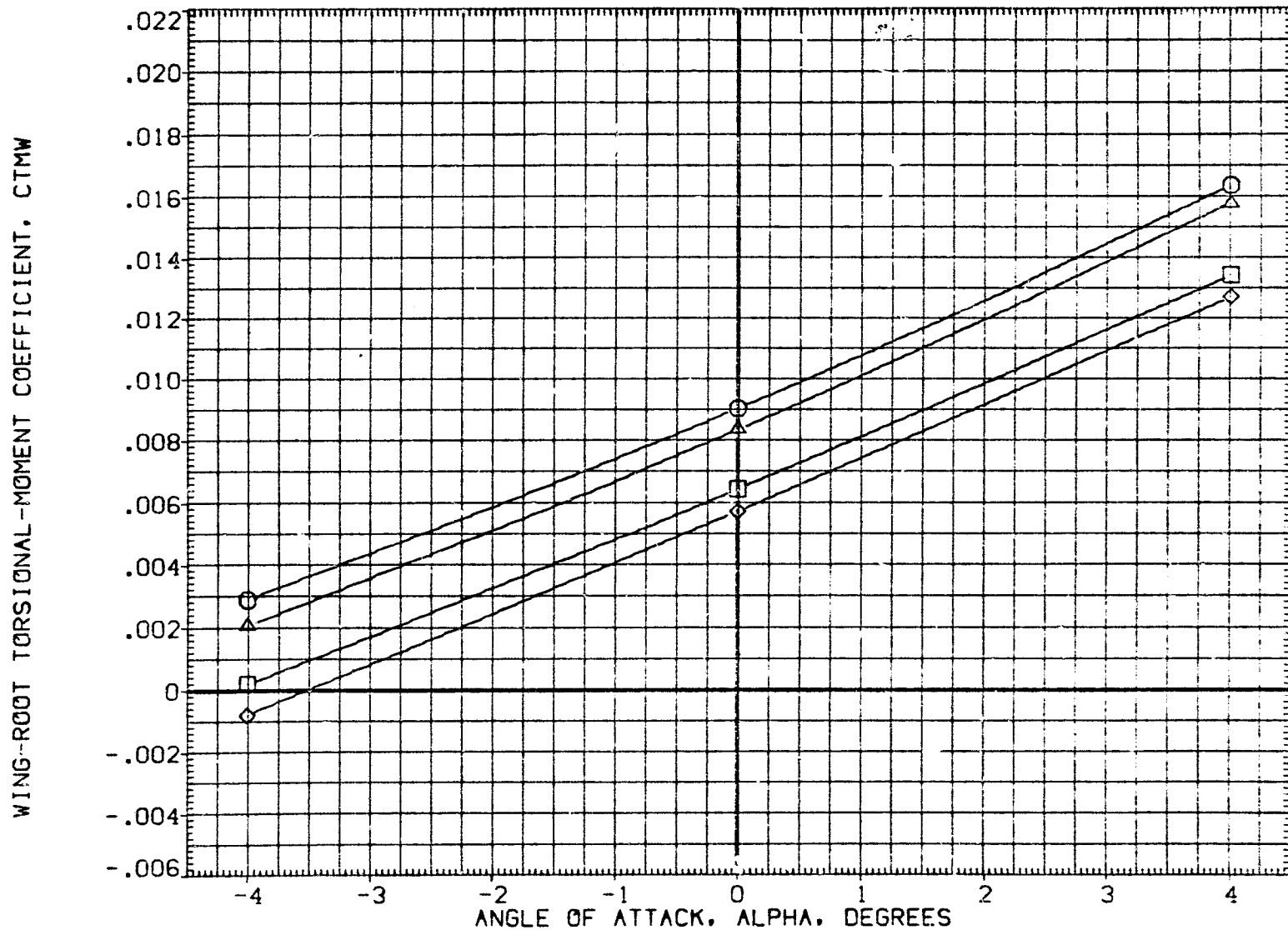


FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6

PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X37)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4X58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

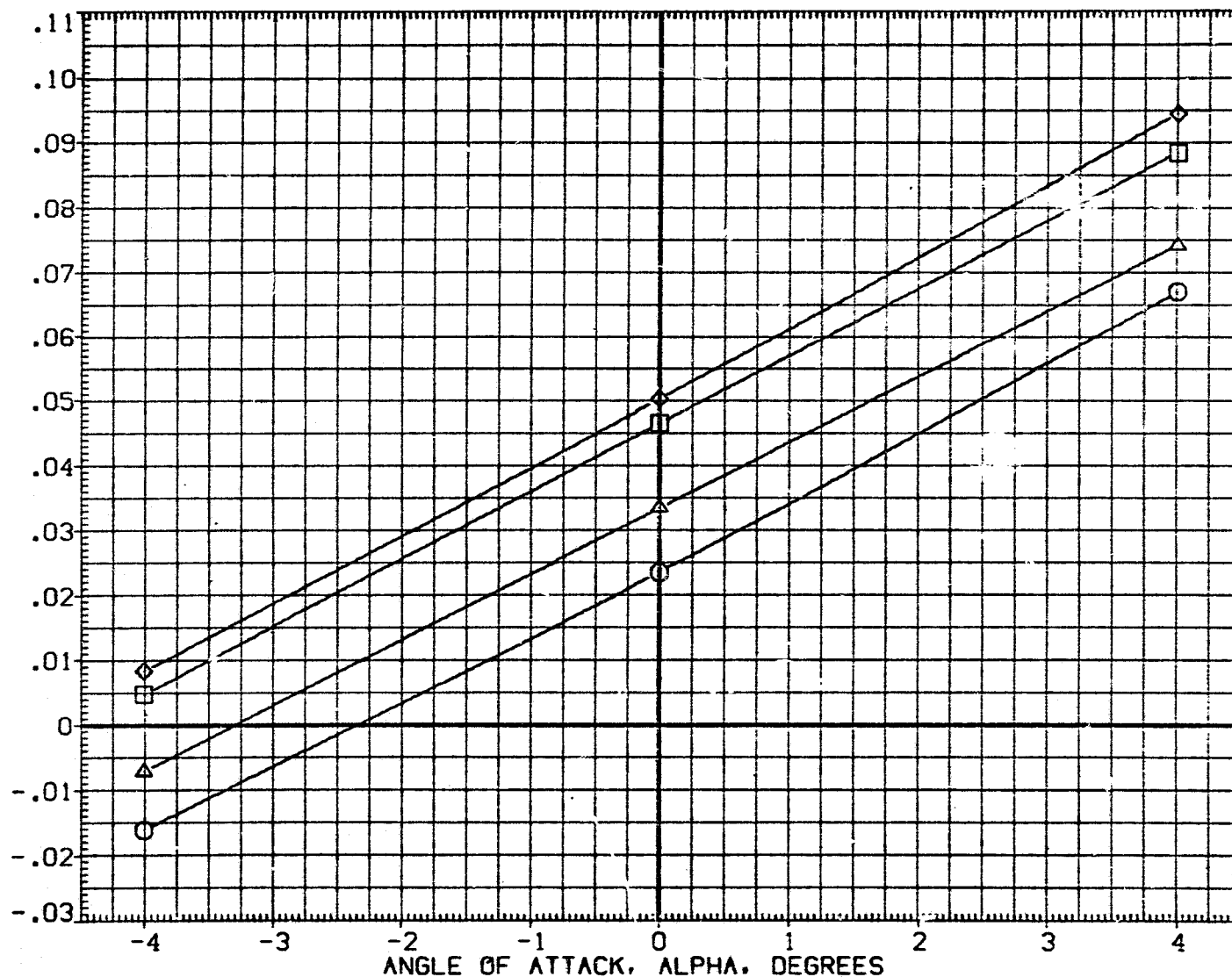


FIG. 24 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.6 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4XA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4X96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

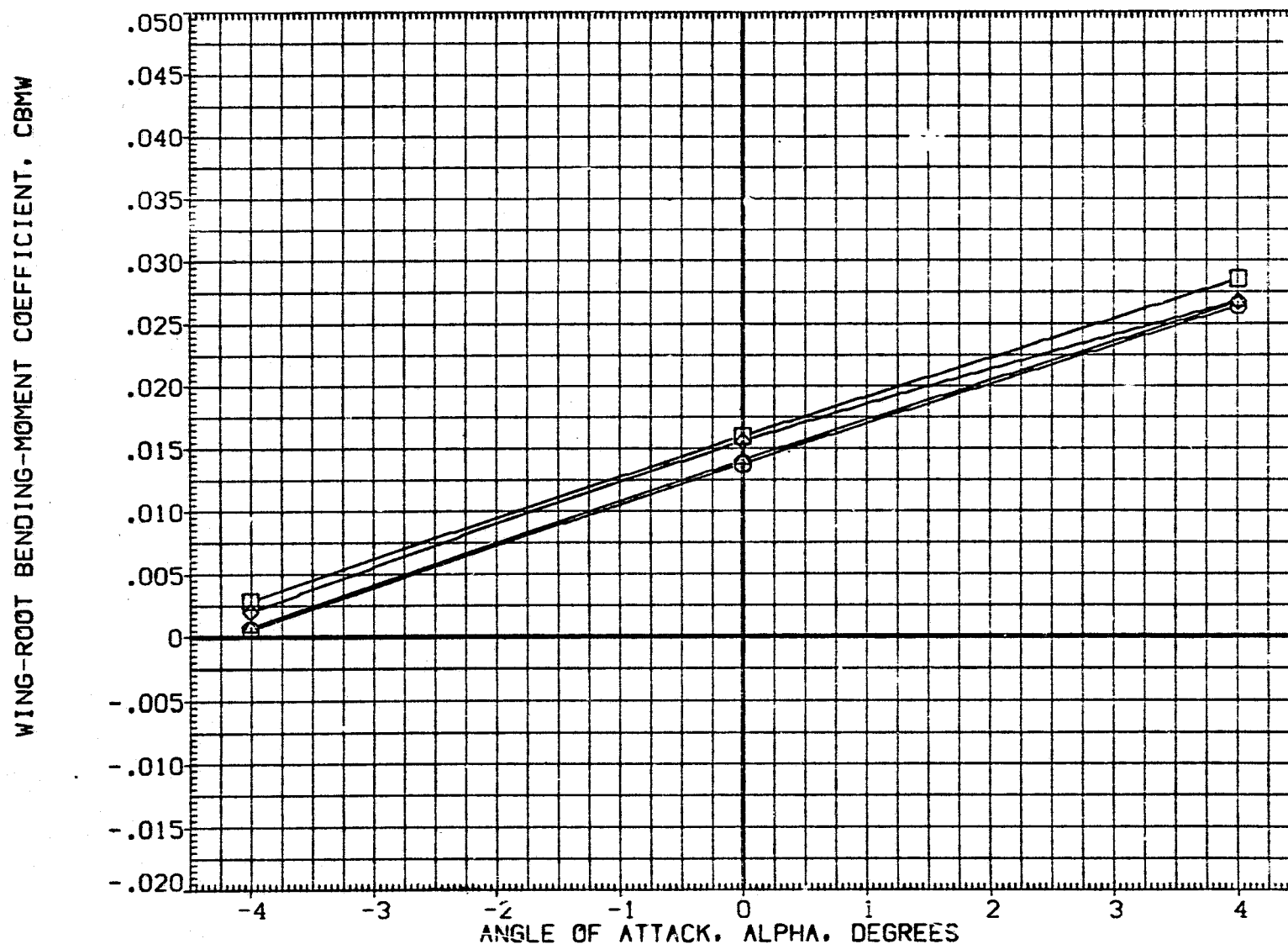


FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4XA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4X96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTM_W

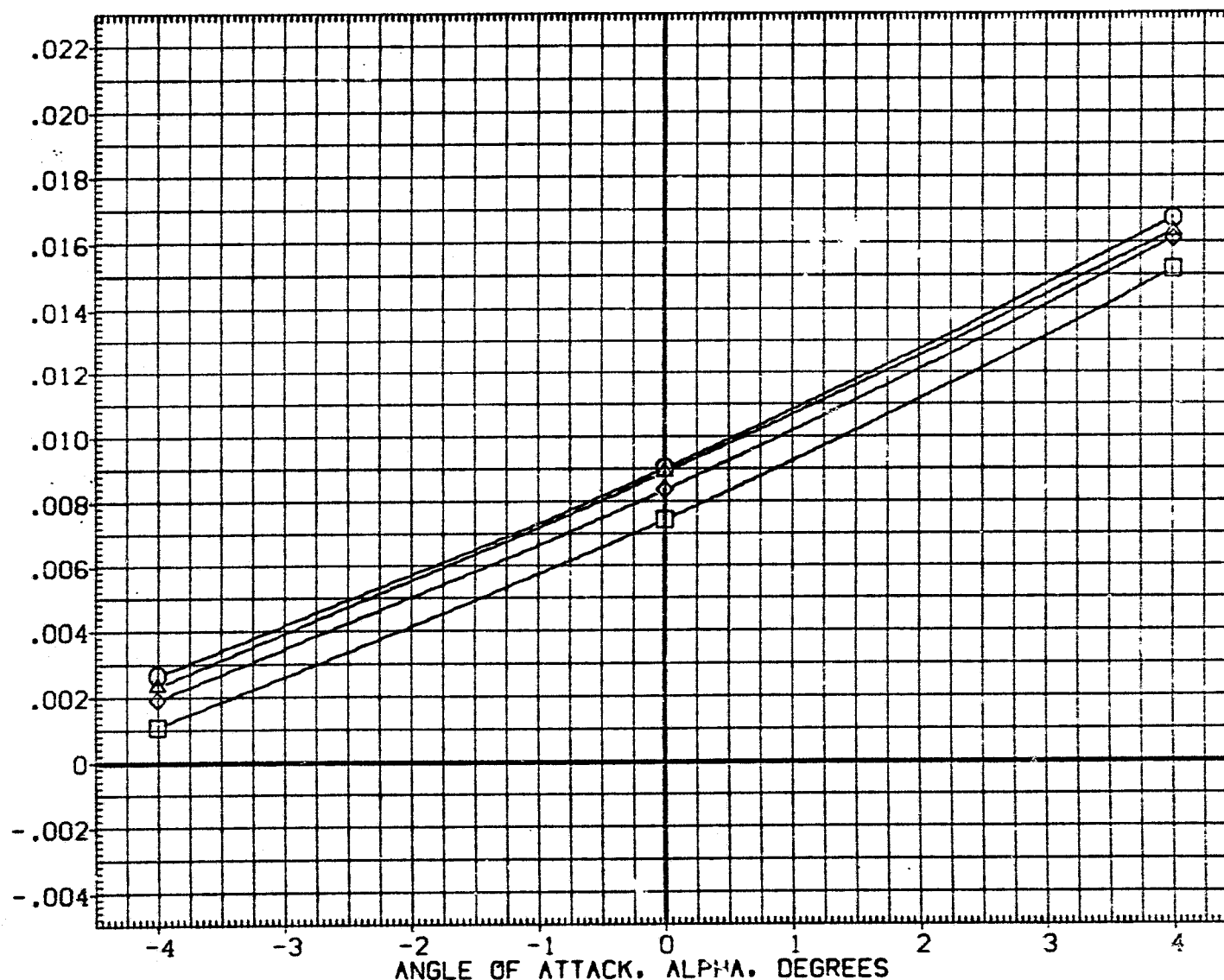


FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON
 (A) BETA = .00 PAGE 108

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SG.FT.
(RE4XA6)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4X96)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X80)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

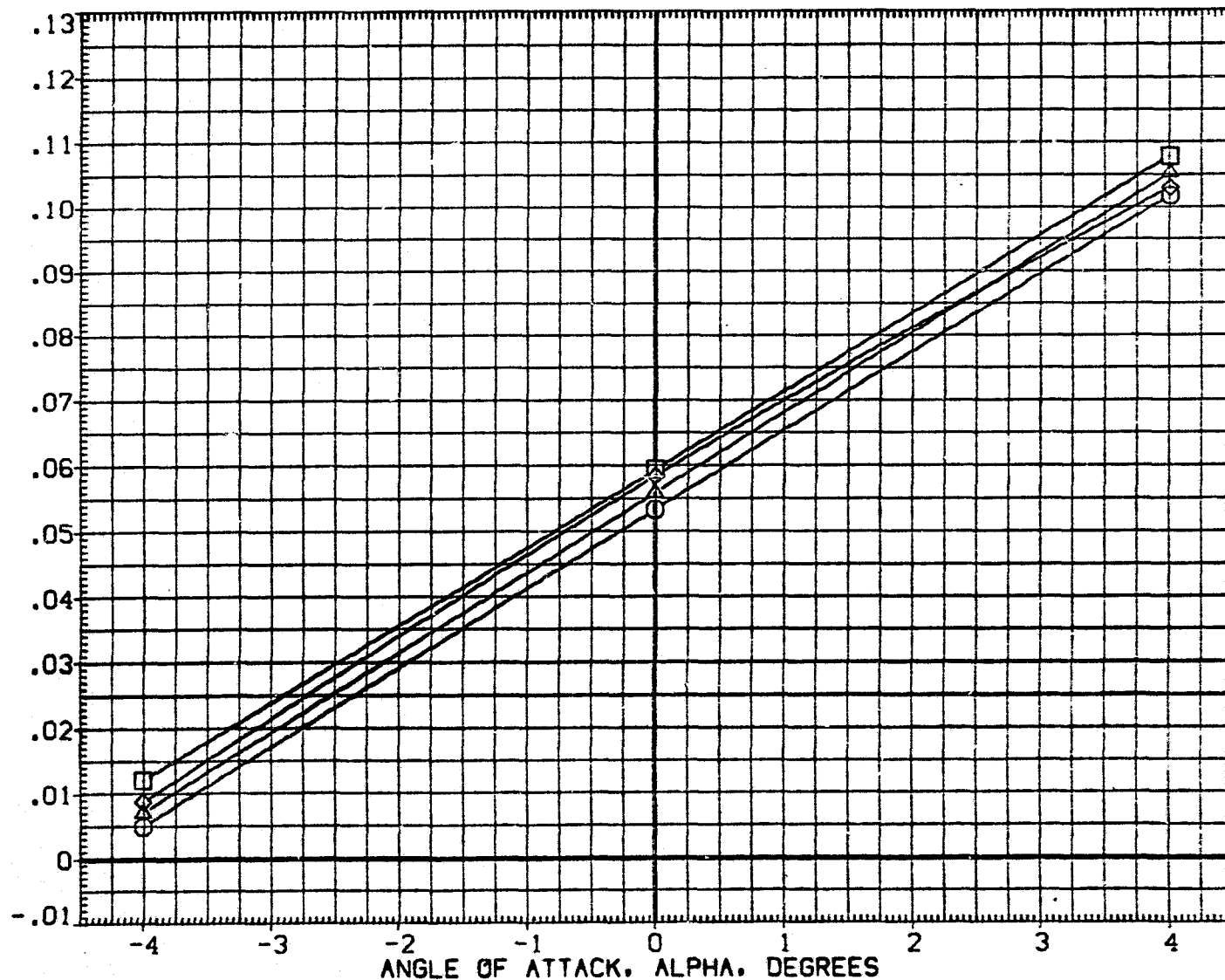


FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X08)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4X59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

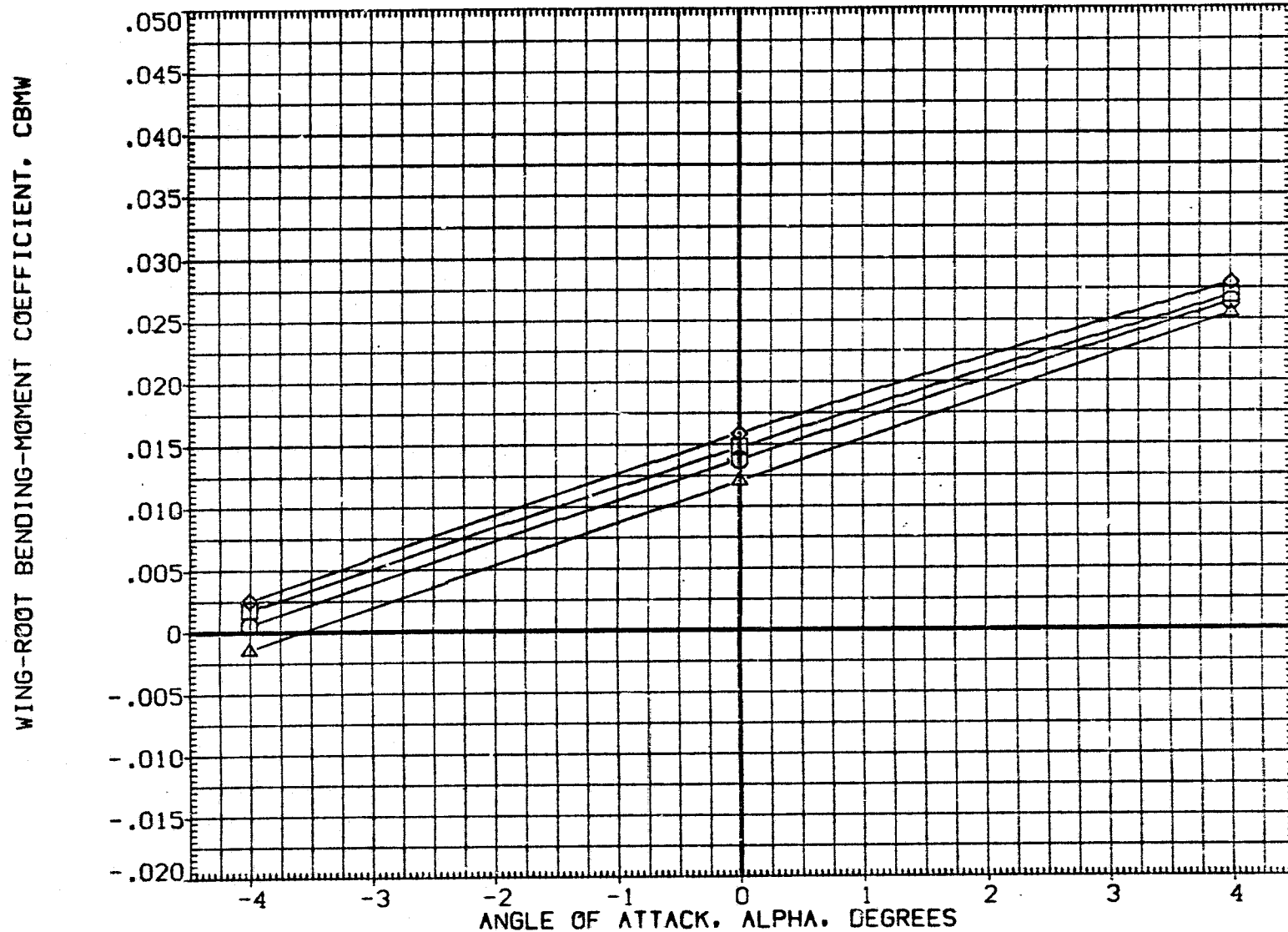


FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9

(A) BETA = .00

PLUMES ON

PAGE 110

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SC.FT.
(RE4X88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4X59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

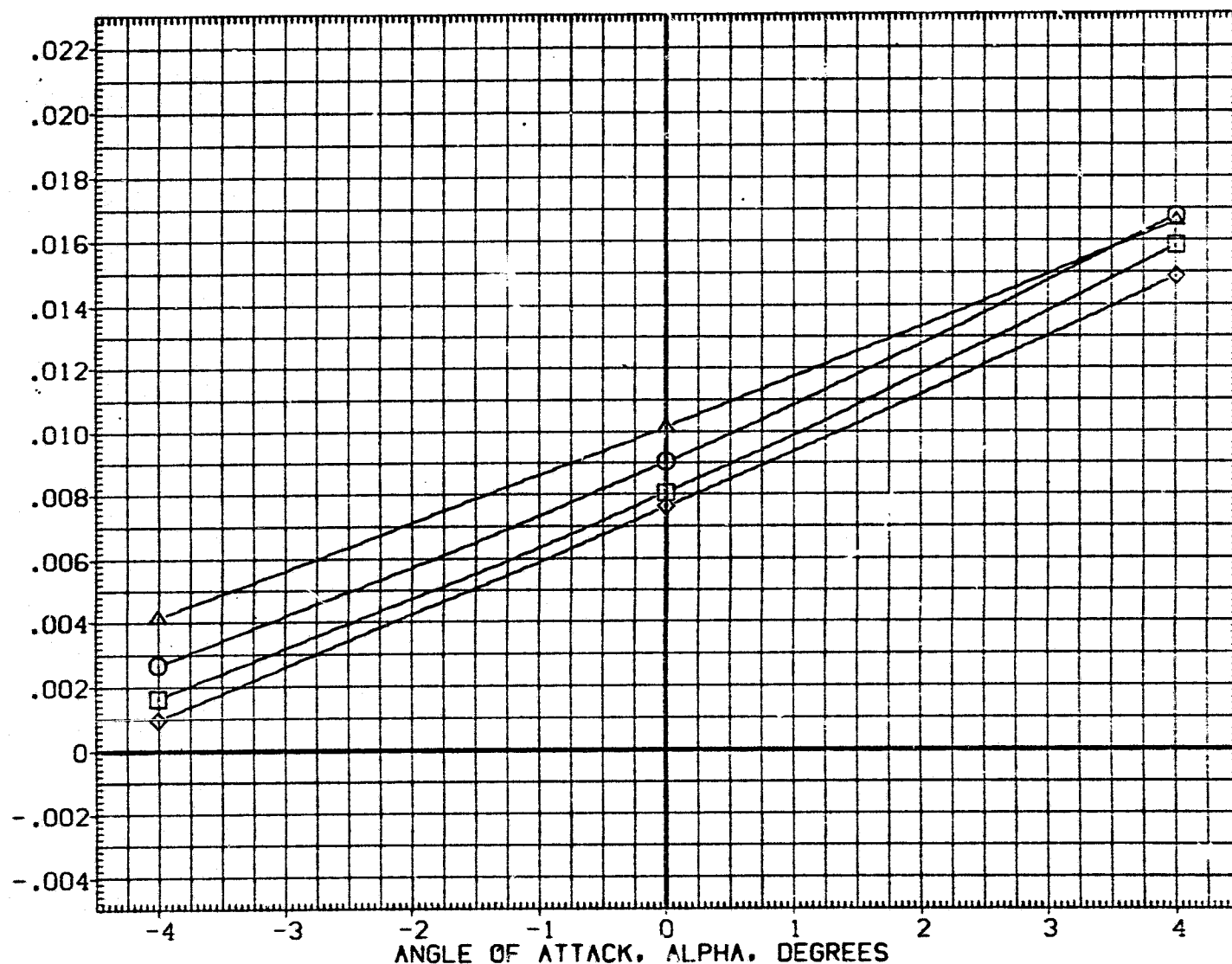


FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4X88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4X59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BRFF	1290.3000	IN.
(RE4X70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

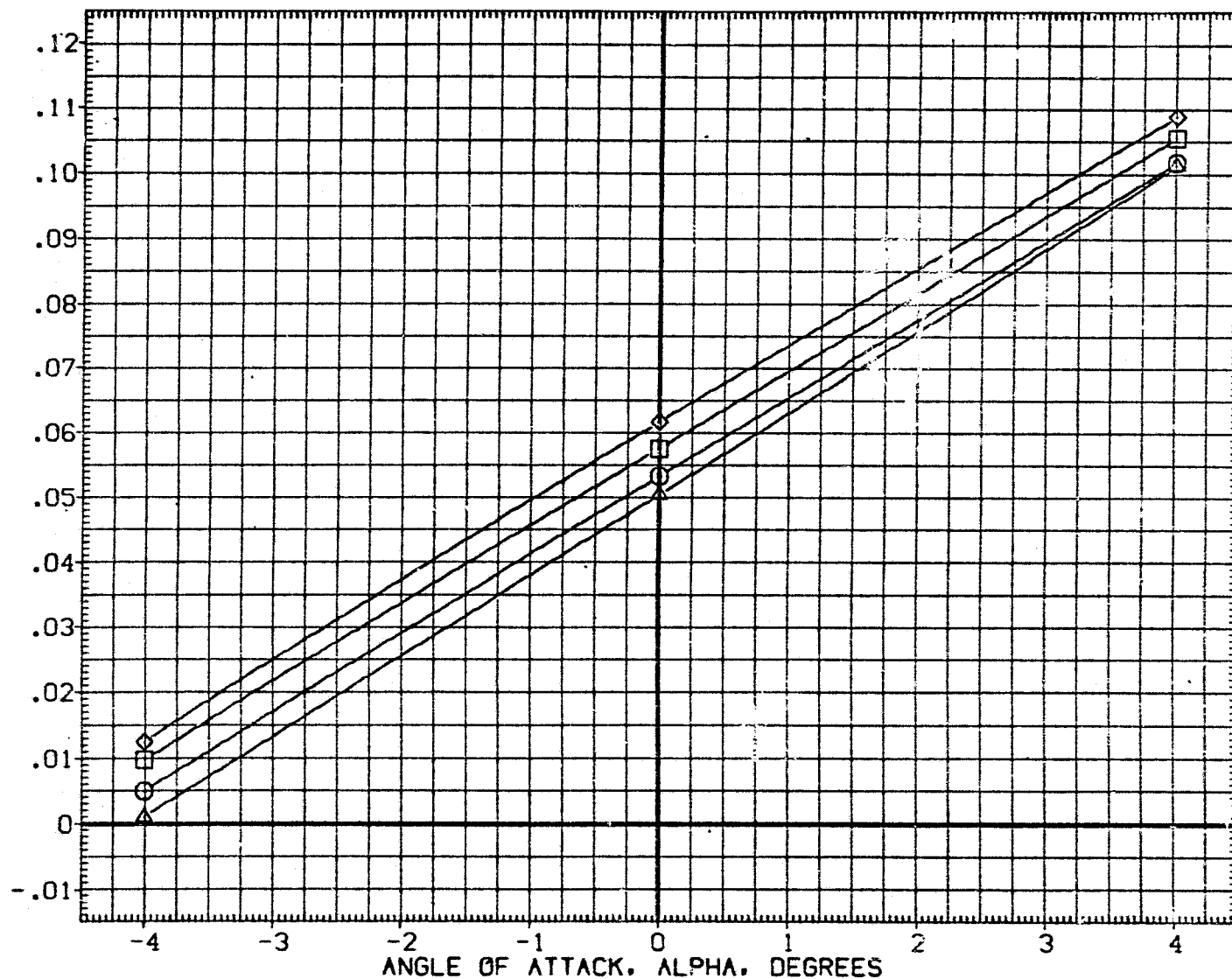


FIG. 25 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=0.9 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4XA7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X97)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X81)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

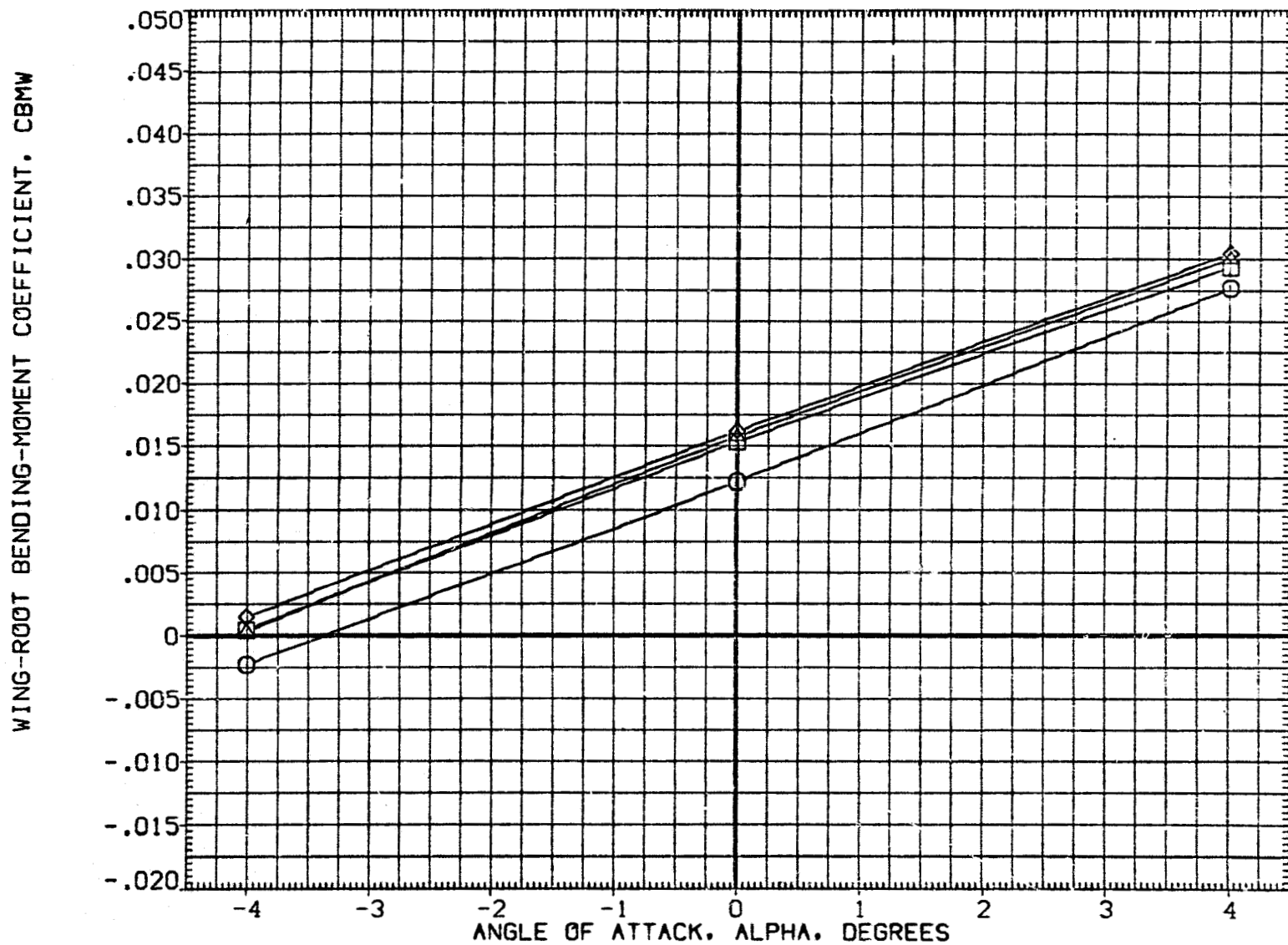


FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON
 (A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X22)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X7)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X97)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X81)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMMP	.0000 IN.
							YMMP	.0000 IN.
							ZMMP	.0000 IN.
							SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

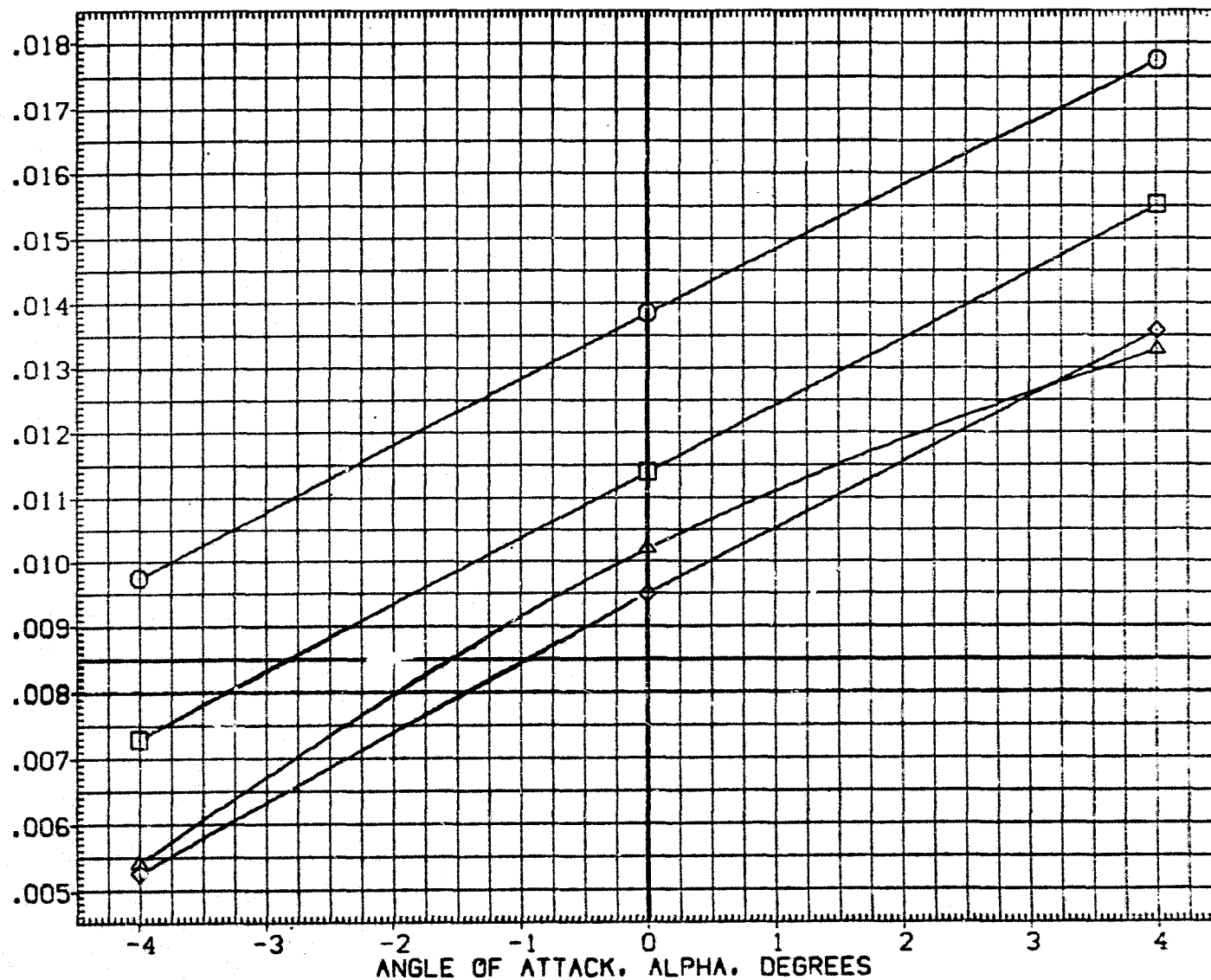


FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4XA7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X97)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4XB1)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

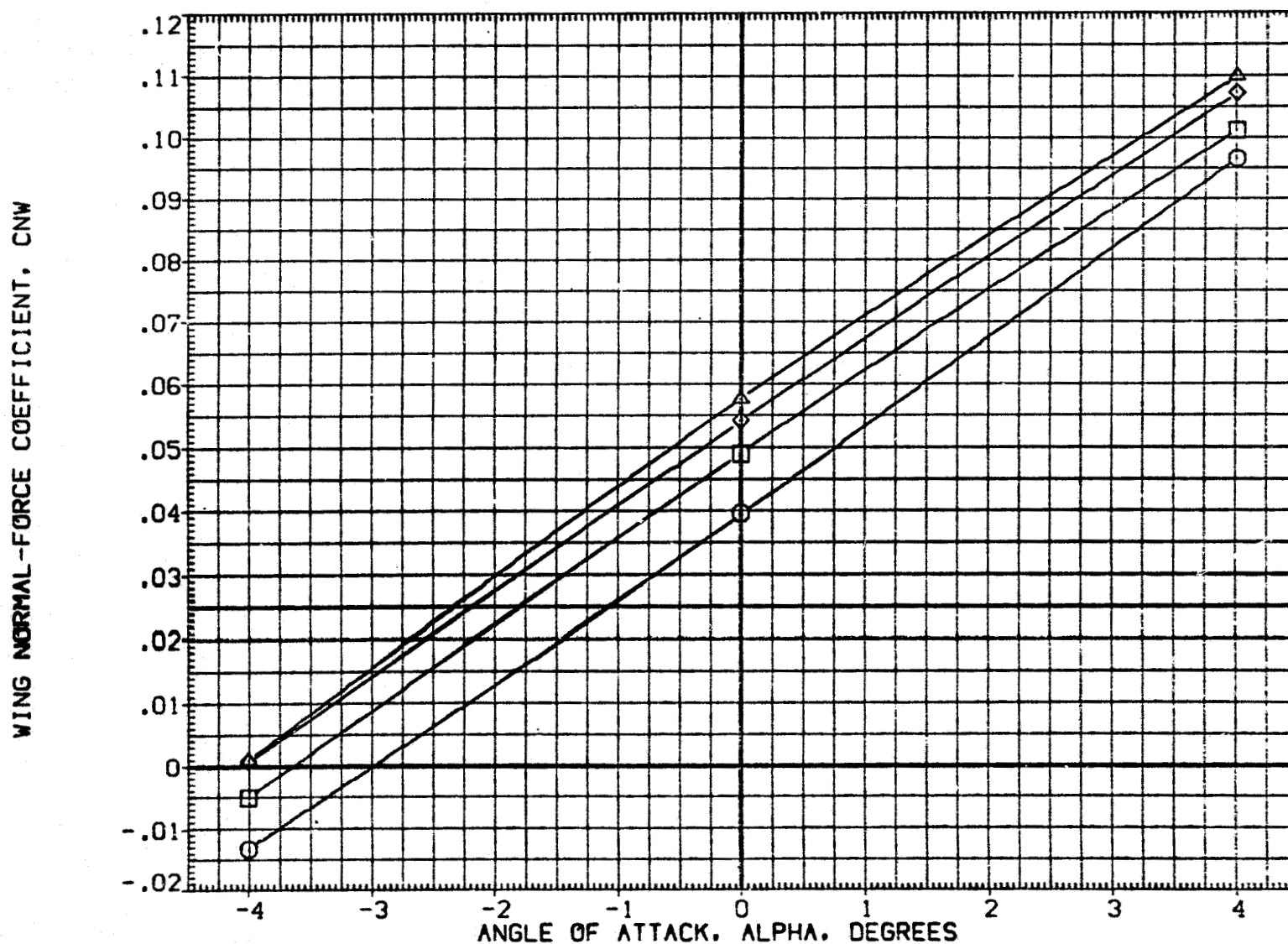


FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X22)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X89)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X60)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X71)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

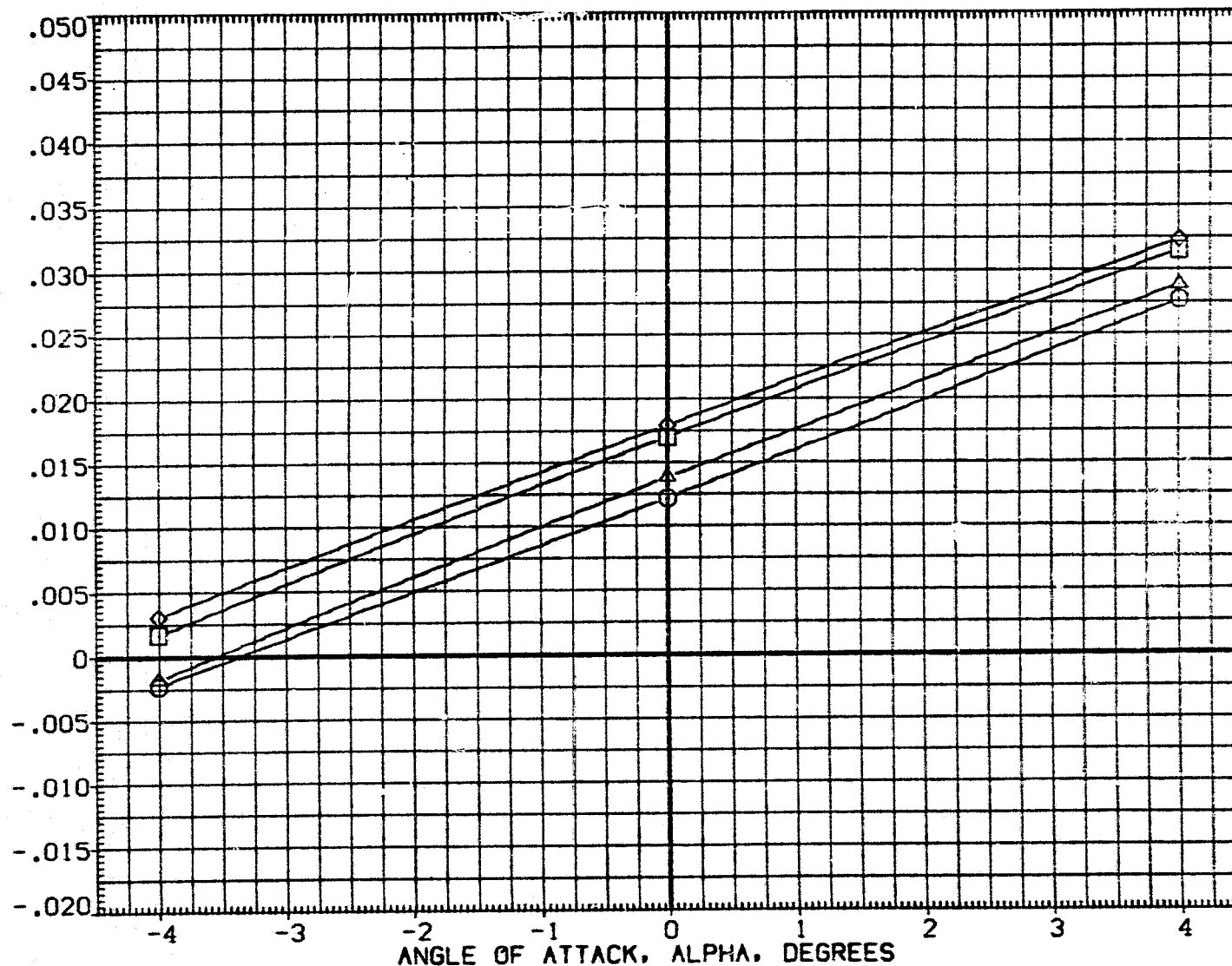


FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-16	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.030	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

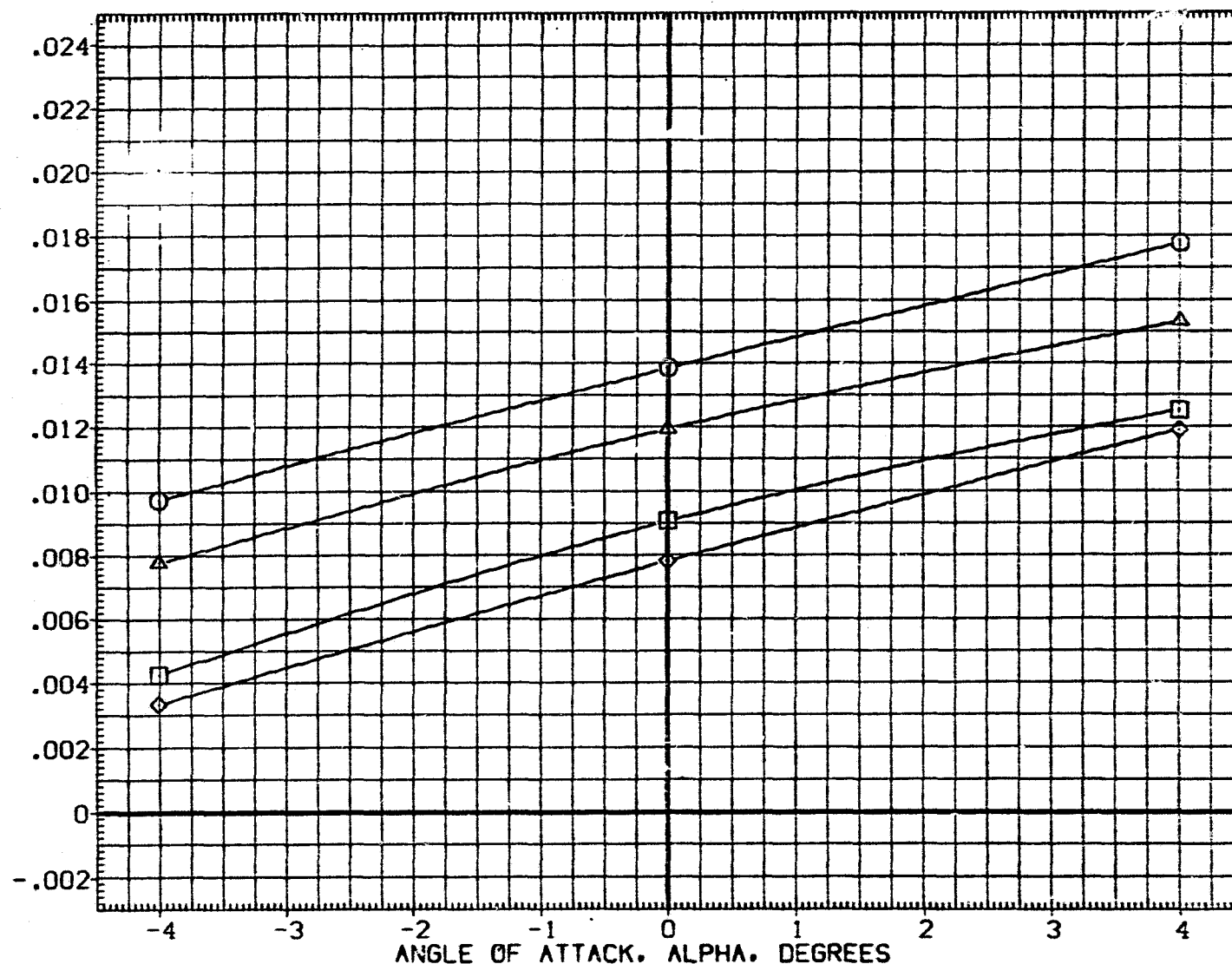


FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2F35.0000	50.FT.
(RE4X89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	RREF	1290.3000	IN.
(RE4X71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	X-MRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.3200	

WING NORMAL-FORCE COEFFICIENT, CNW

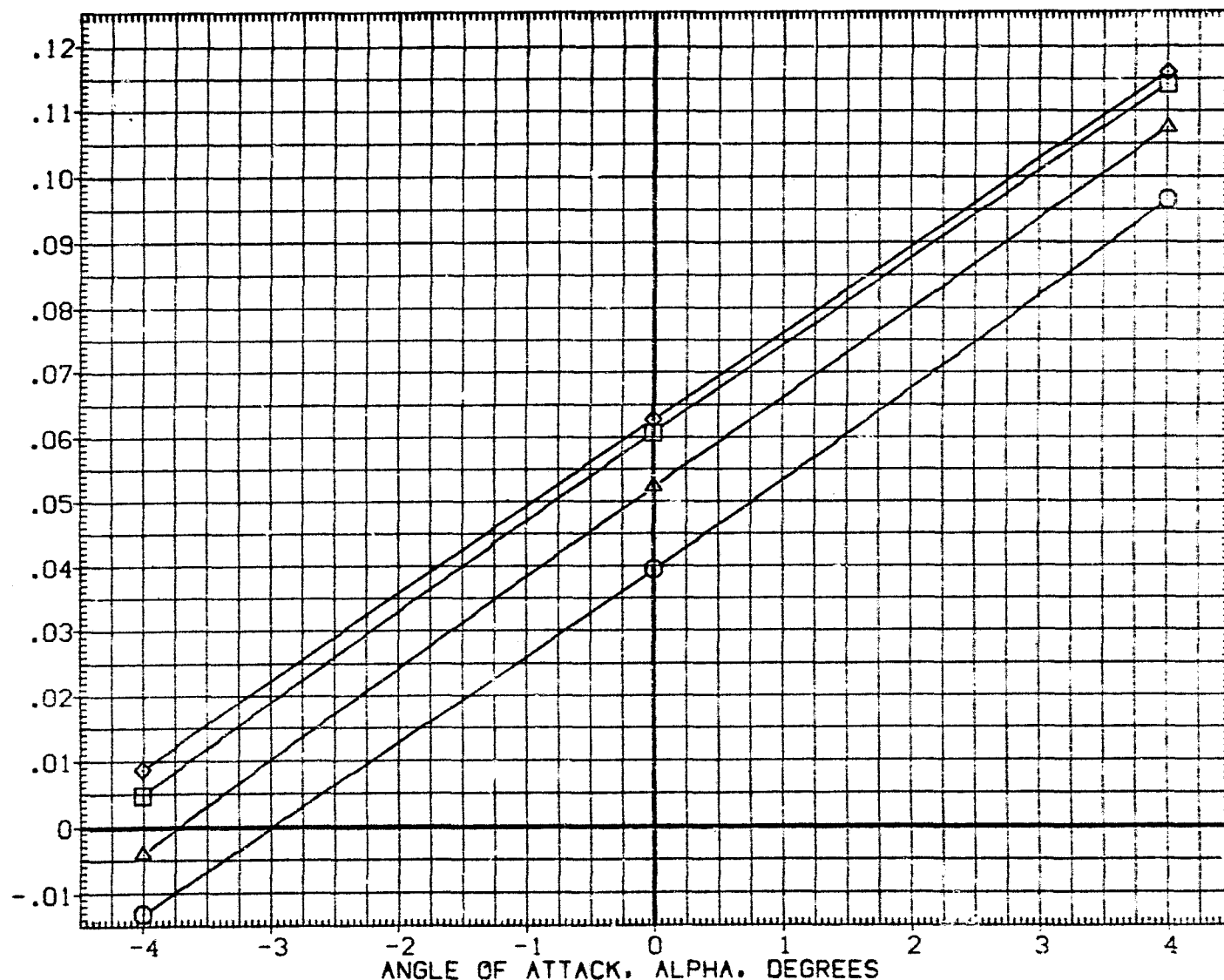


FIG. 26 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	SO.FT.
(RE4XA8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

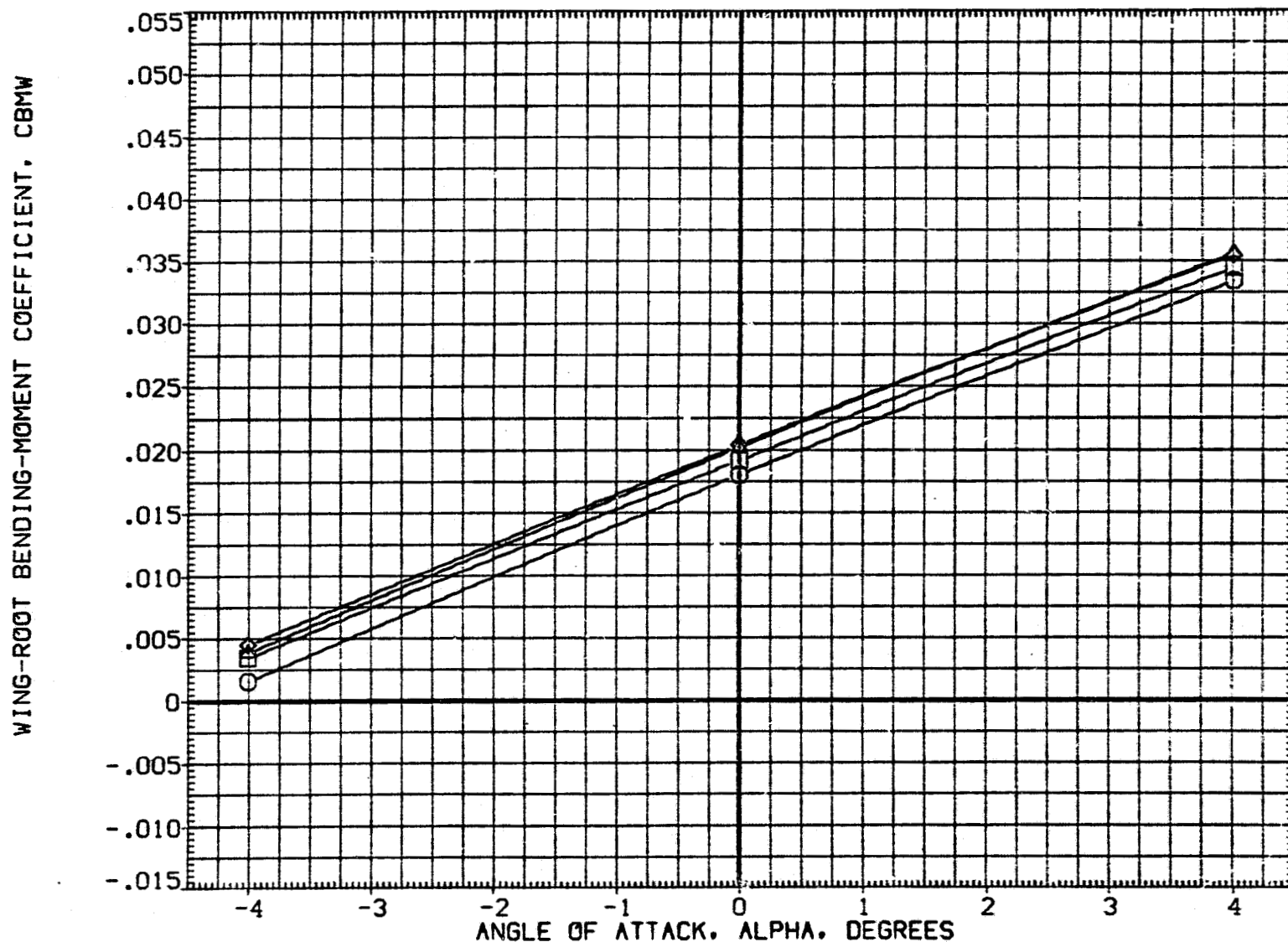


FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4XA8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4X82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

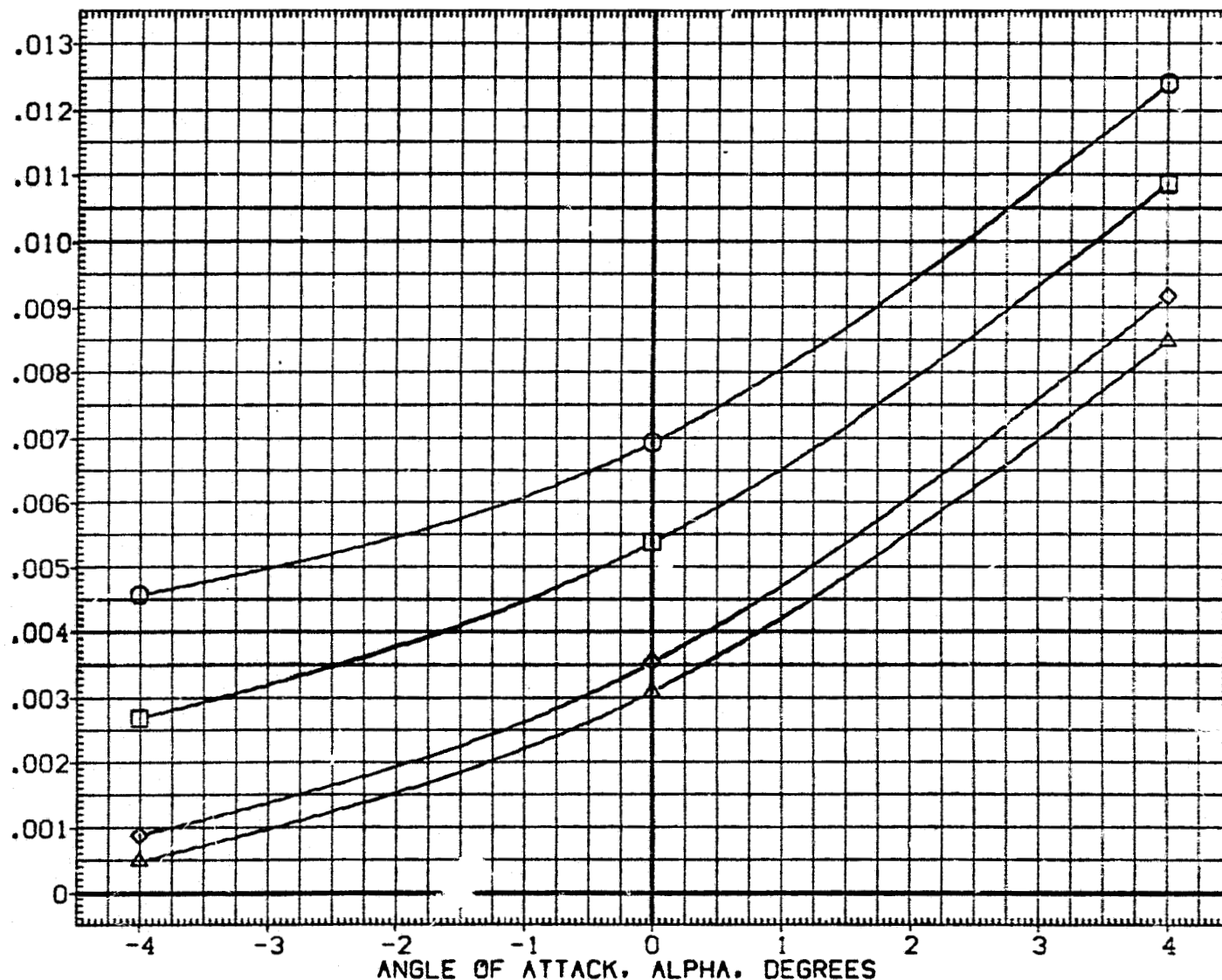






FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X23) 	ARC 11-023 1A50 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4XAB) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X98) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X82) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

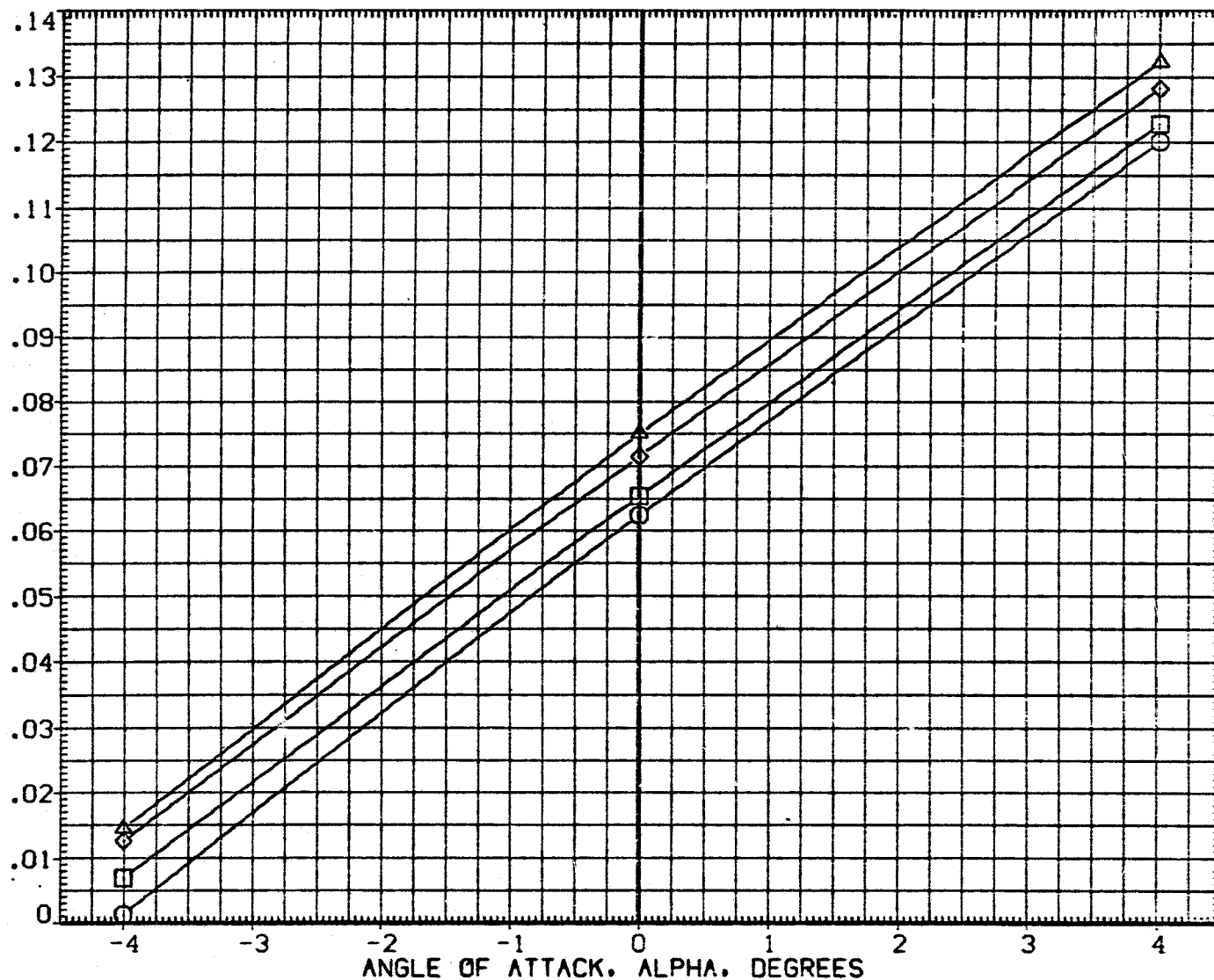


FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A) BETA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X61)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X72)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

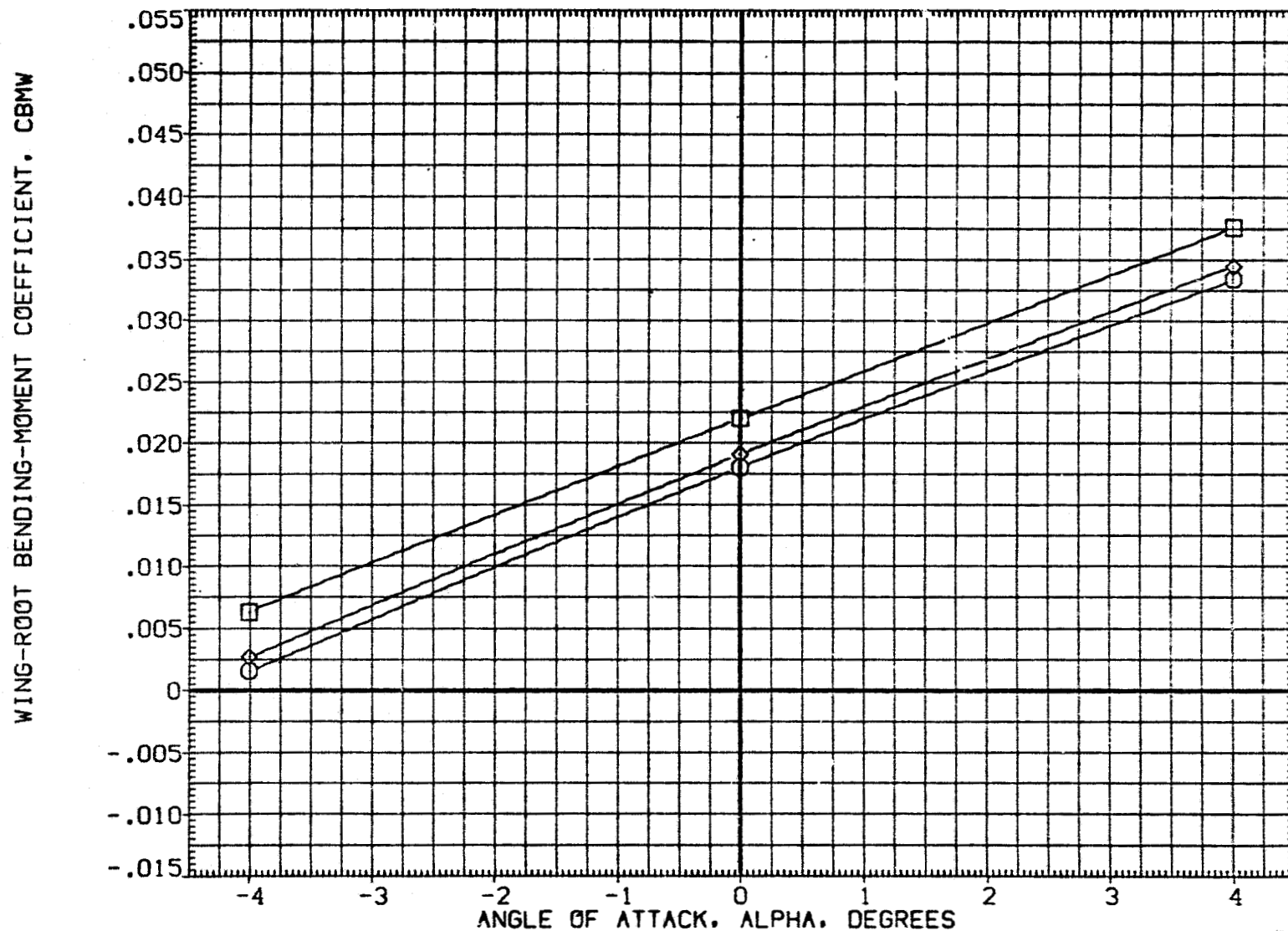


FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4X61)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X72)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

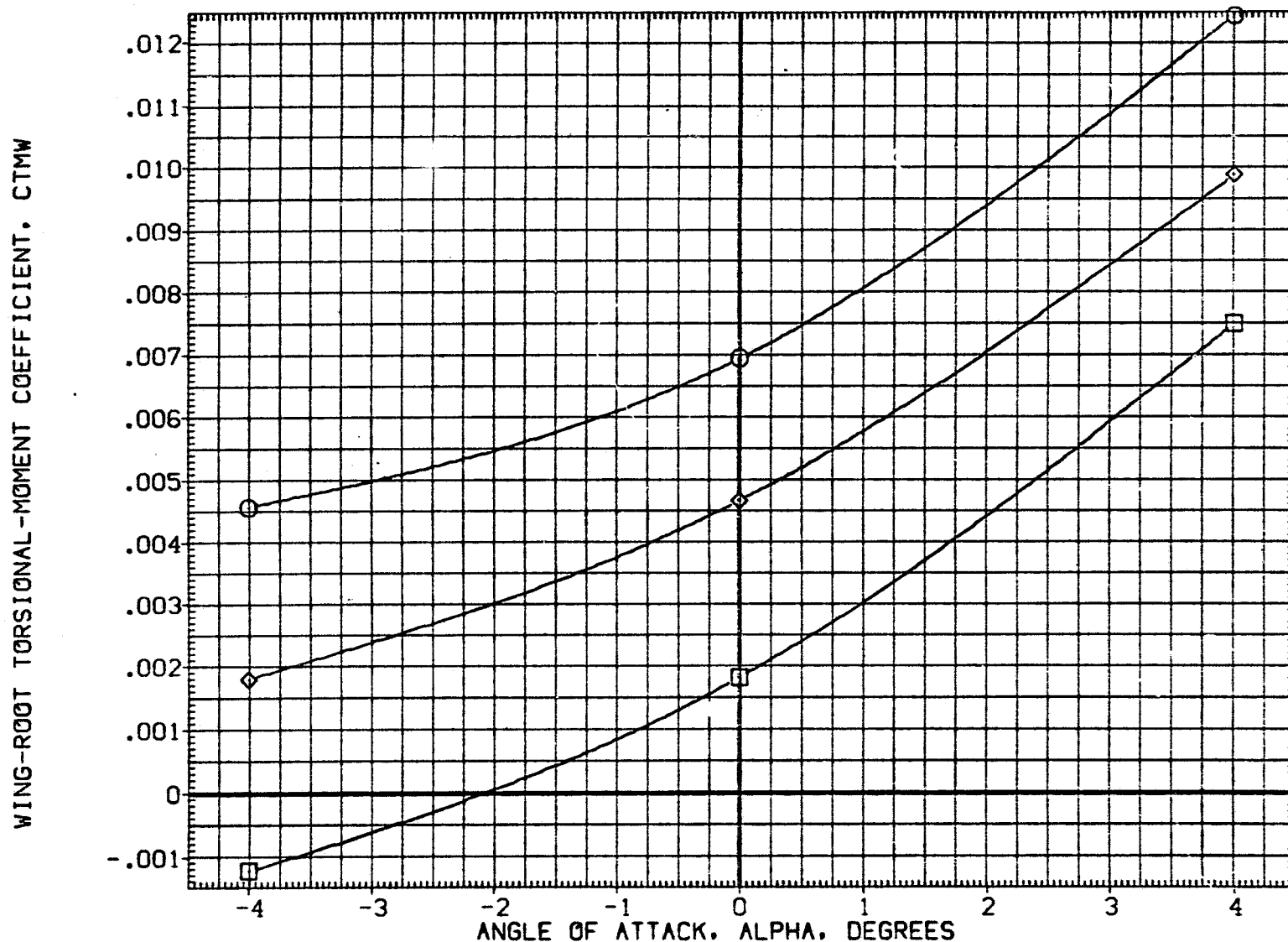


FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X23)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X61)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X72)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

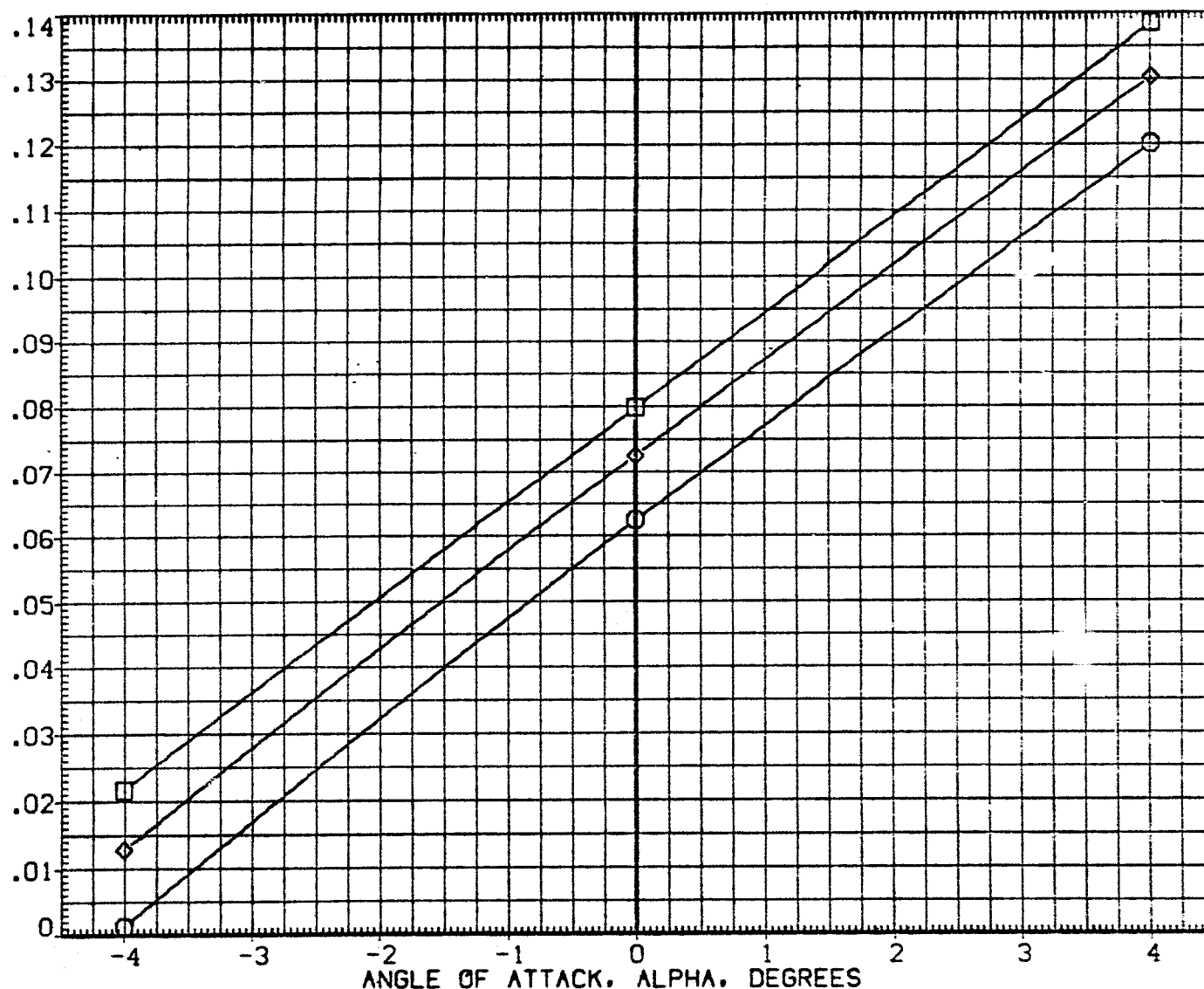


FIG. 27 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.25 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X24)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4XA9)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X99)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X83)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

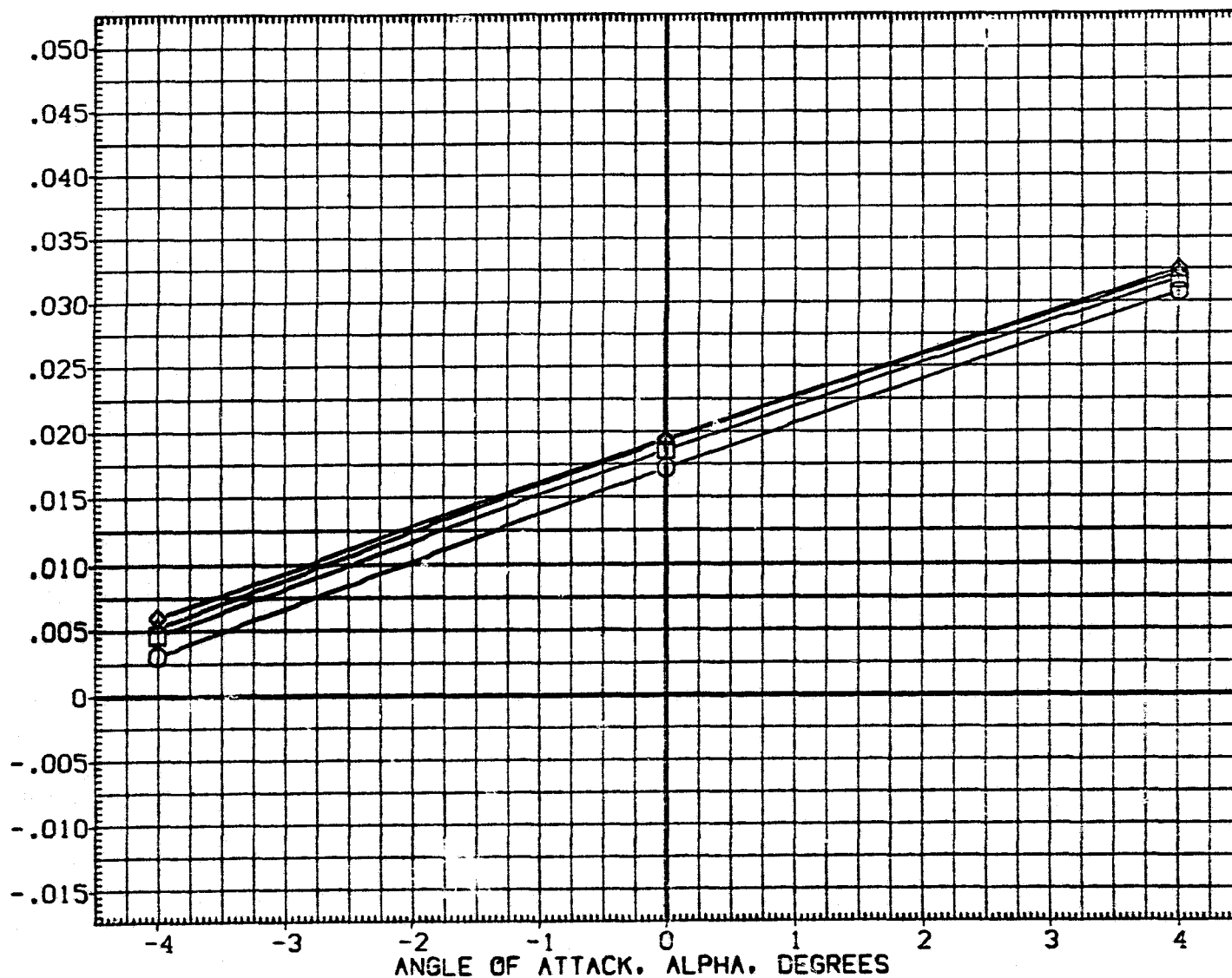


FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000
(RE4XA9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000
(RE4X99)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000
(RE4X83)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

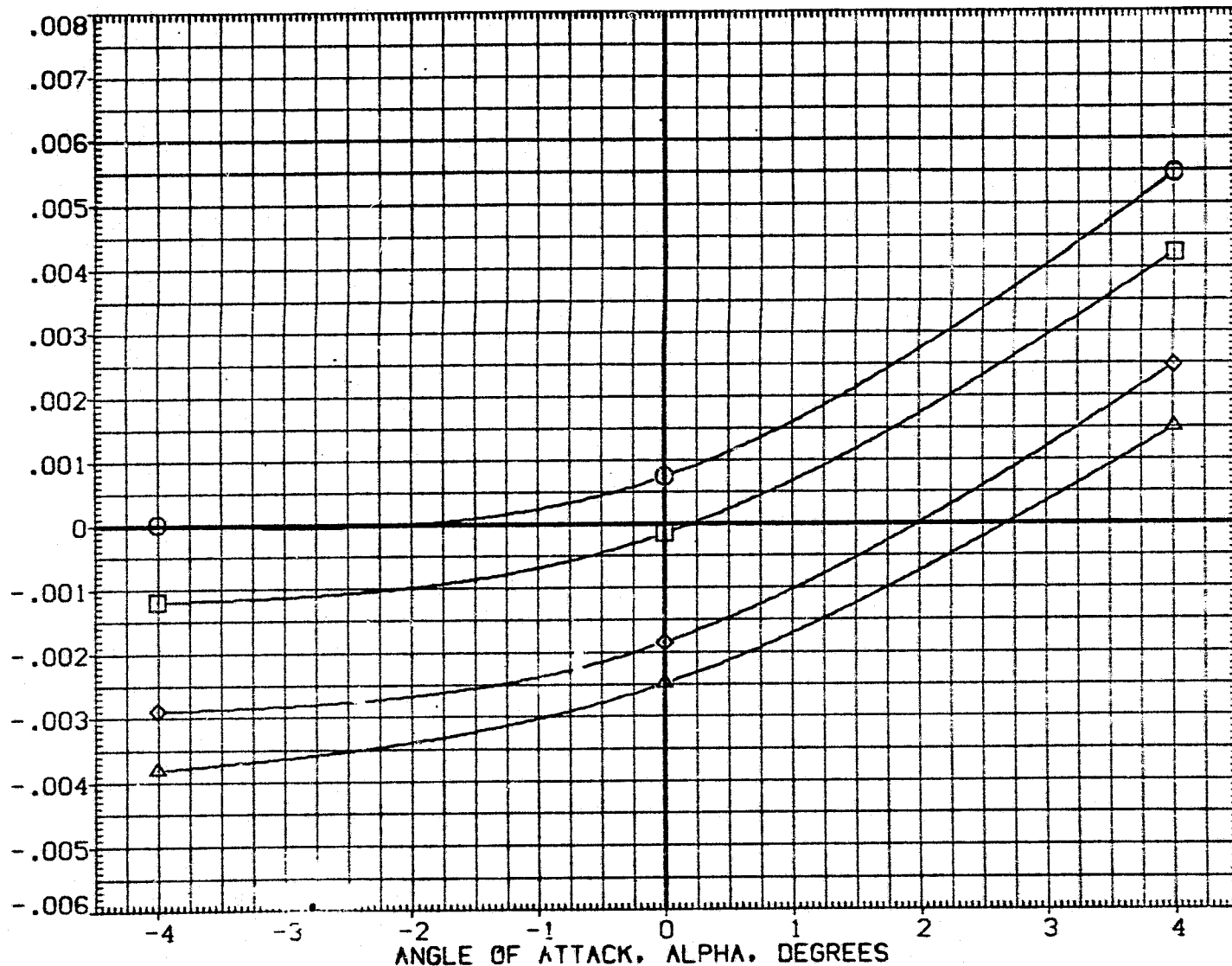


FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON
(A) BETA = .00 PAGE 126

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X24)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4XA9)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X99)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4XB3)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

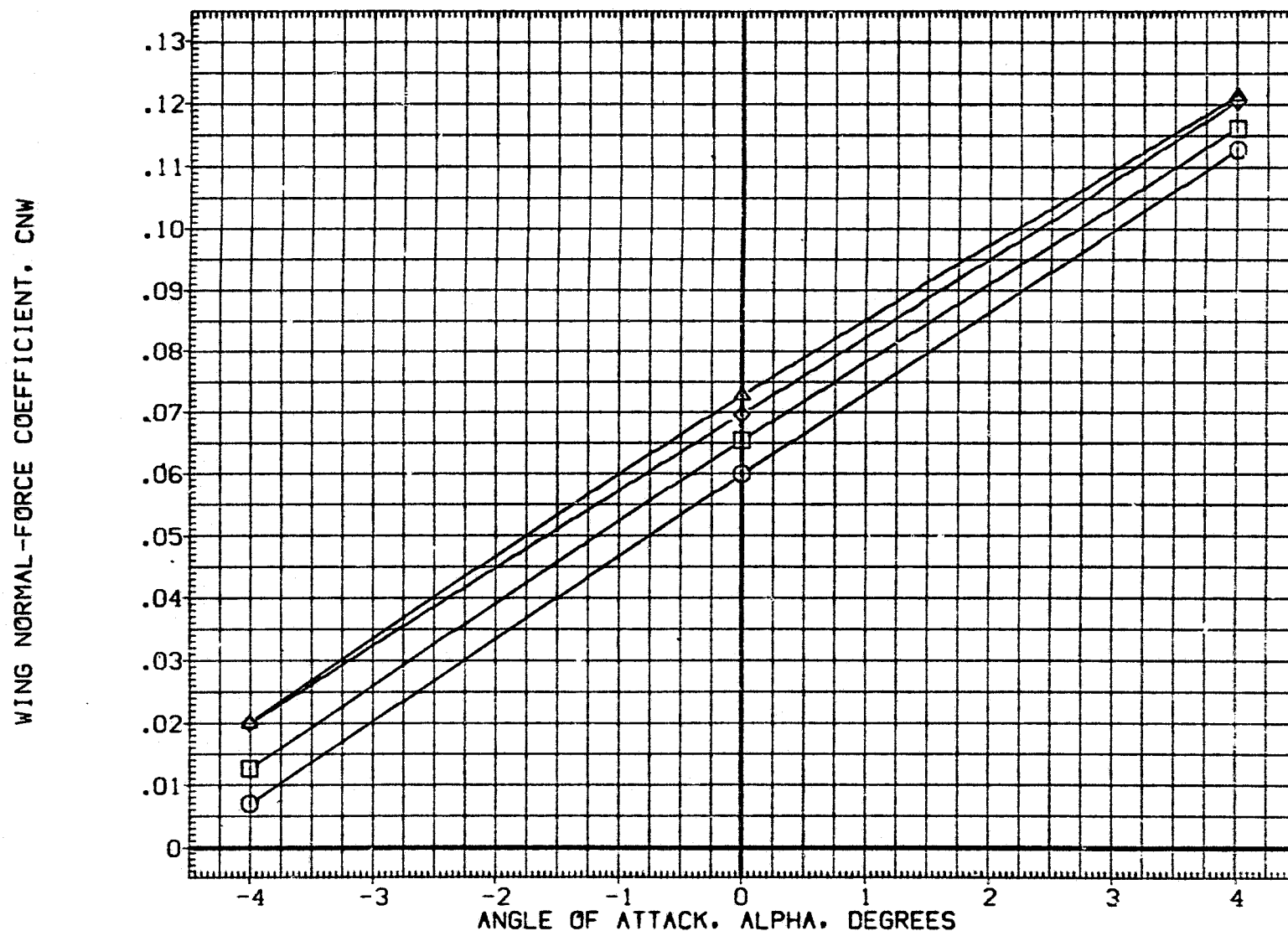


FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X24) \square	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)
(RE4X62) \circ	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
				BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

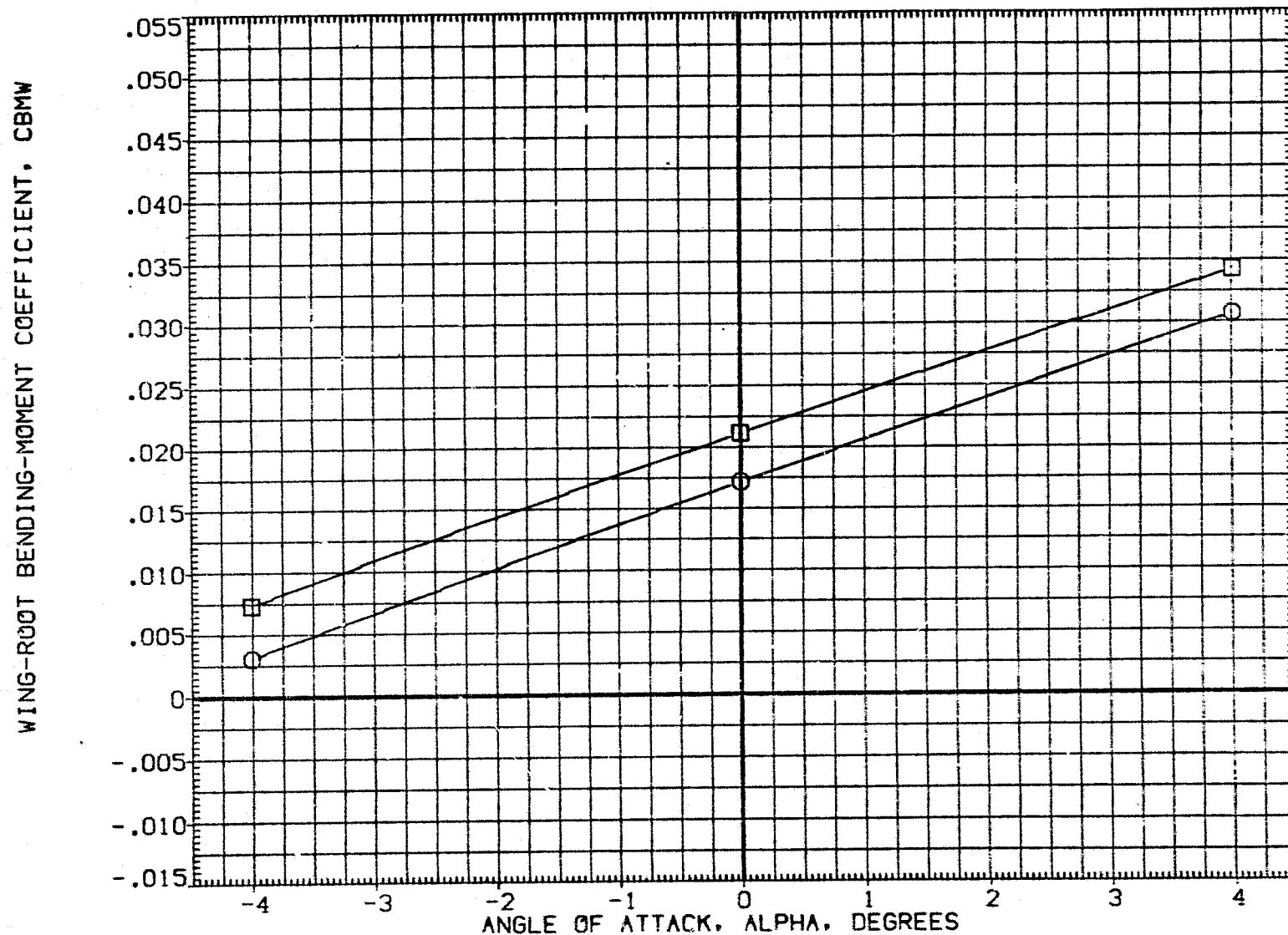




FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X24) 	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4X62) 	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	1.400	4.250	LREF 1290.3000 IN.
						BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

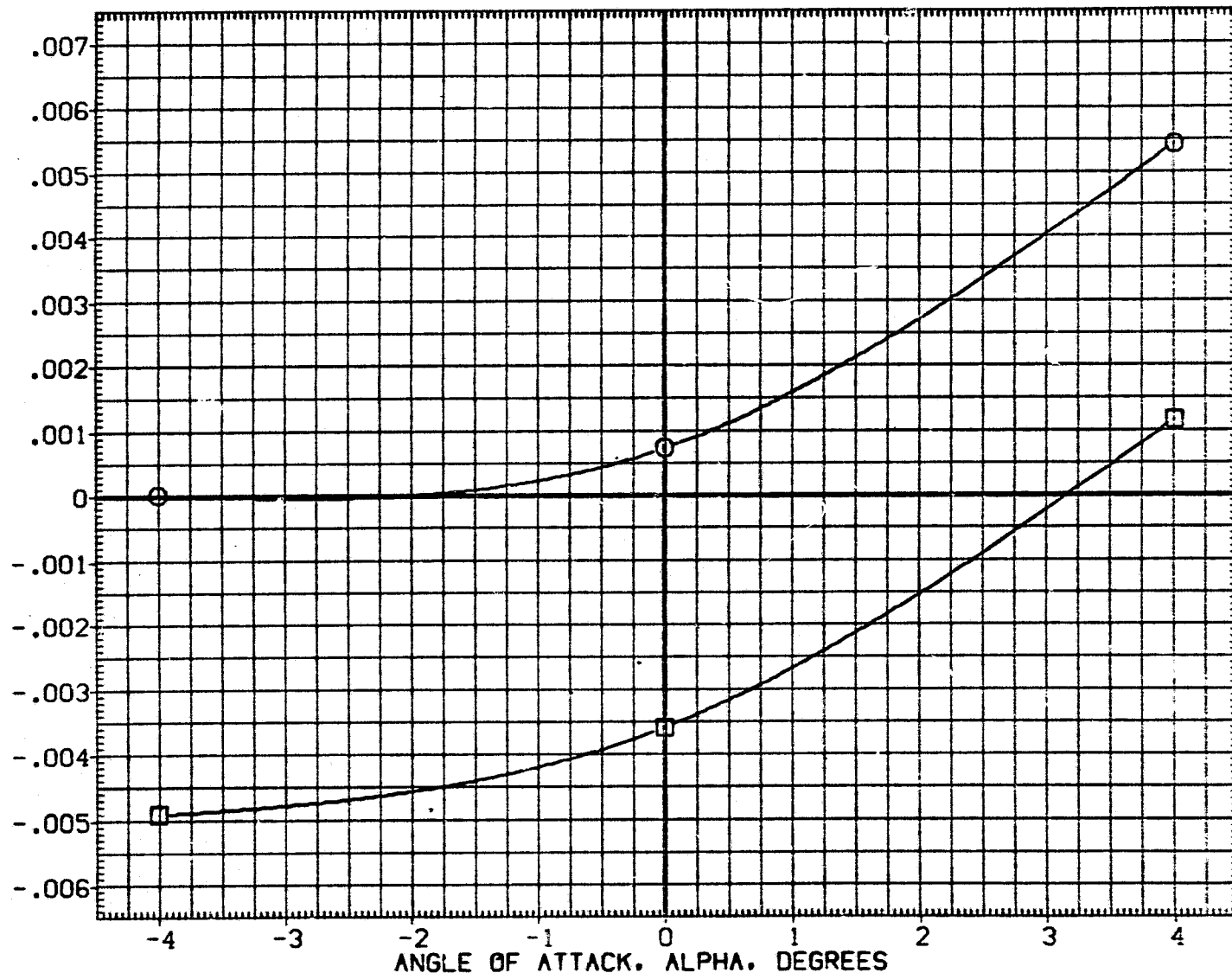


FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X24)	ARC 11-023 (A80 OTS (SRB NOM) (SSME NOM)
(RE4X62)	ARC 11-023 (A80 OTS (SRB NOM) (SSME NOM)

ELV-1B	ELV-09	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	LREF 1290.3000 IN.
				BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

WING NORMAL-FORCE COEFFICIENT, CNW

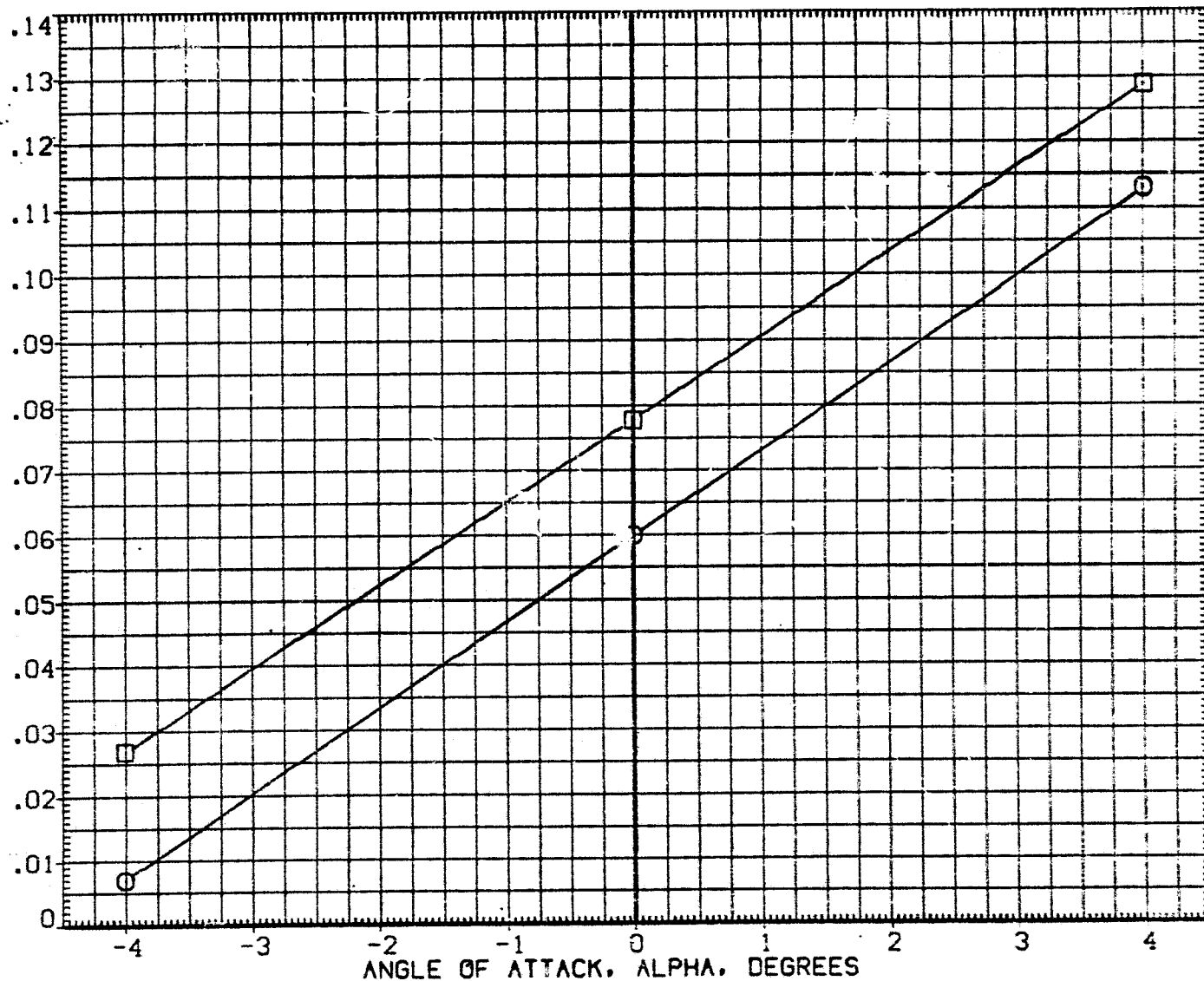


FIG. 28 EFFECT OF ELEVON SETTING ON WING LOADS IN PITCH, MACH=1.4 PLUMES ON
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4XA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000 IN.
(RE4X95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.900	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

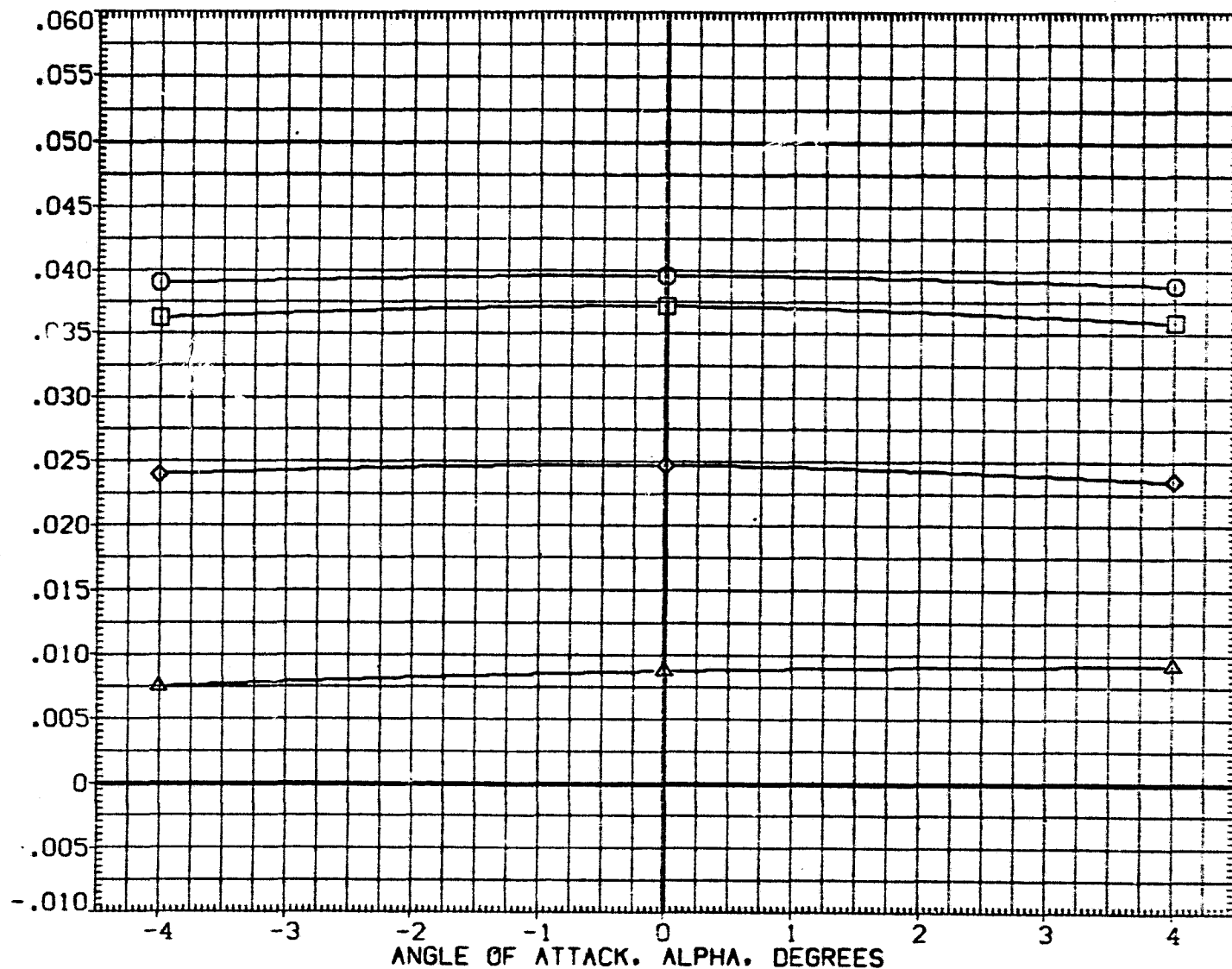


FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X20)	○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF 2690.0000 SQ.FT.
(RE4XA5)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF 1290.3000 IN.
(RE4X95)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF 1290.3000 IN.
(RE4X79)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP .0000 IN.
							YMRP .0000 IN.
							ZMRP .0000 IN.
							SCALE .0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

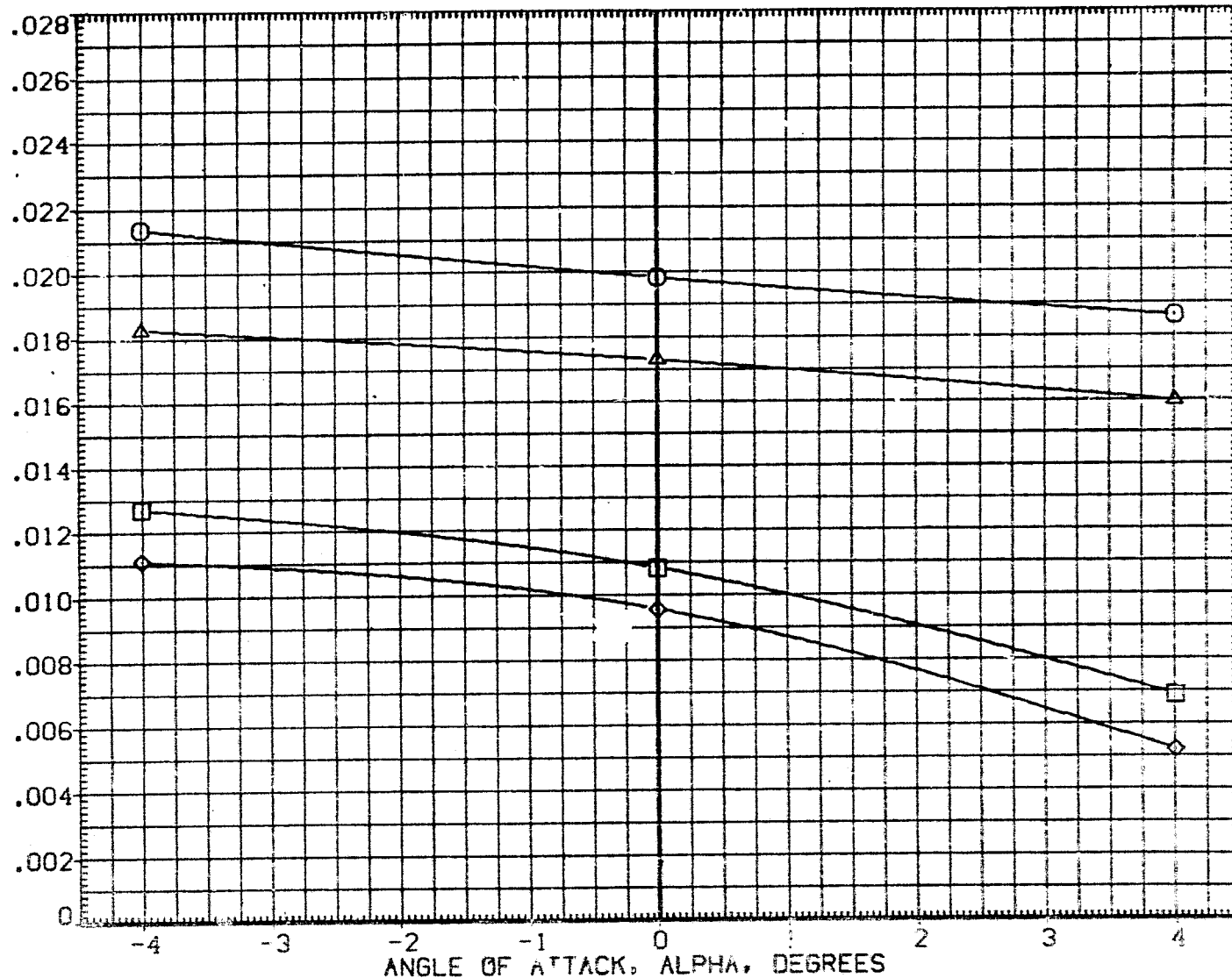


FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON
(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4X87)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4X58)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4X63)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON. CHEI

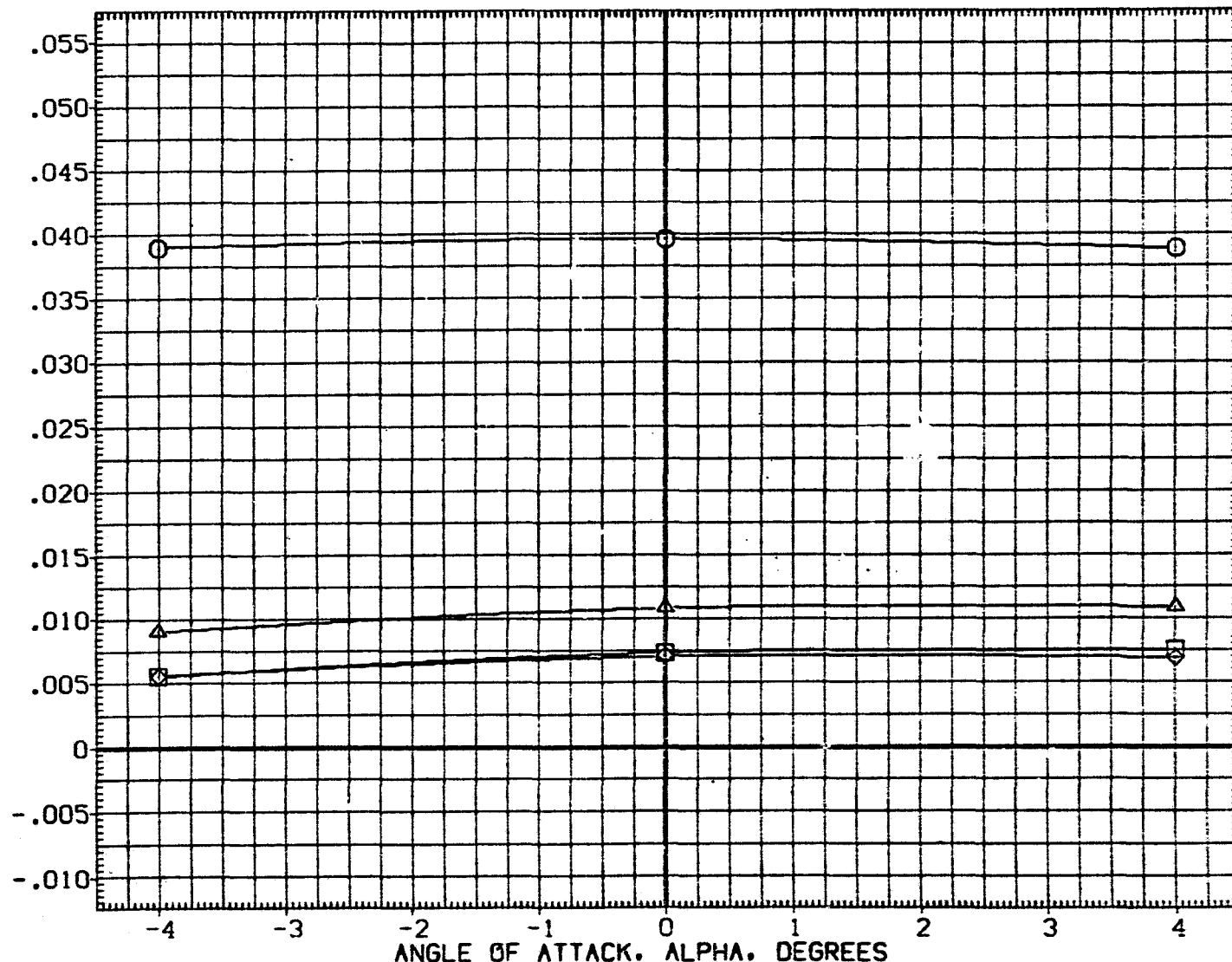


FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X67)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4X58)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4X69)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

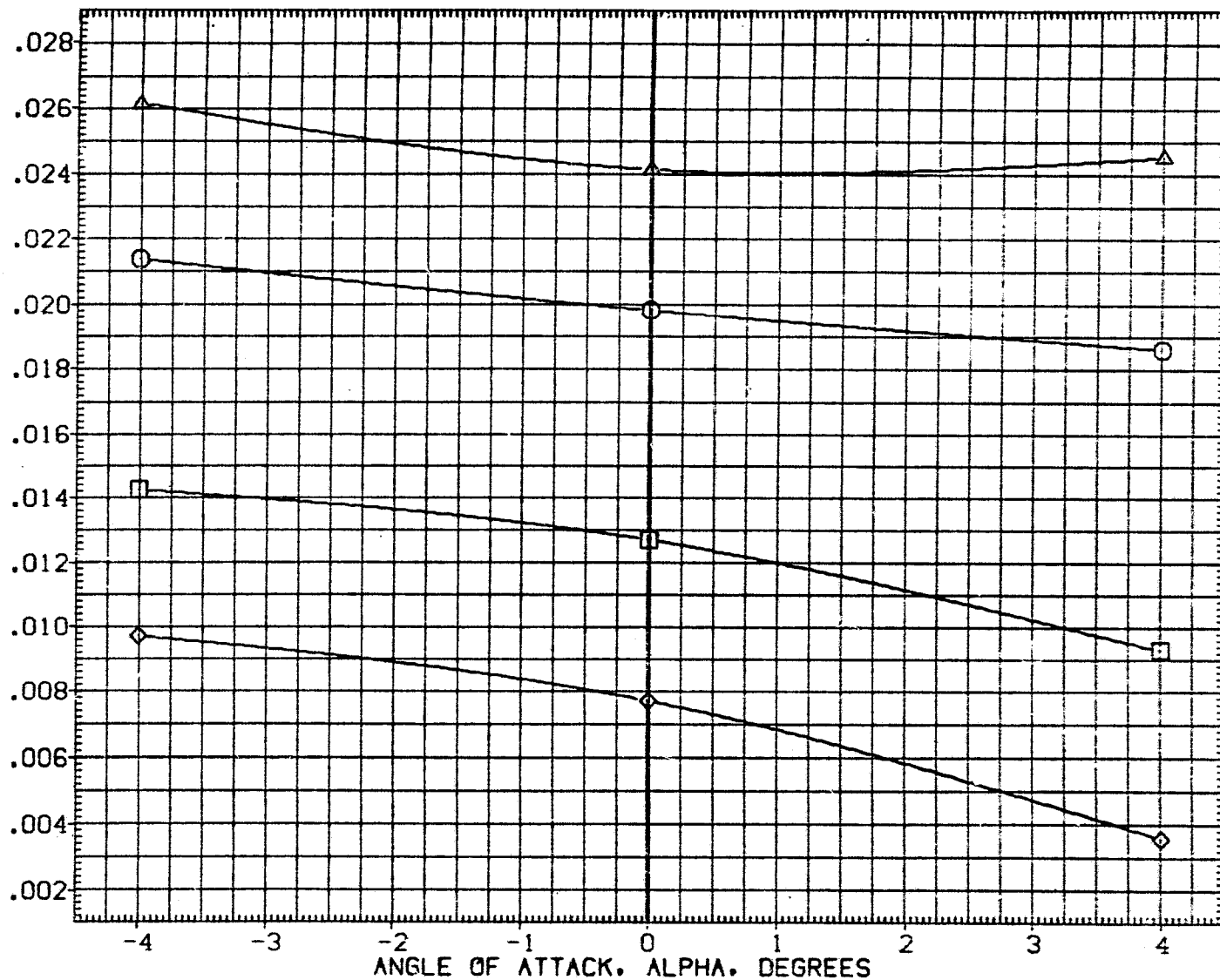


FIG. 29 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.6 PLUME ON
(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	□	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4XA6)	○	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4X96)	△	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X80)	◇	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

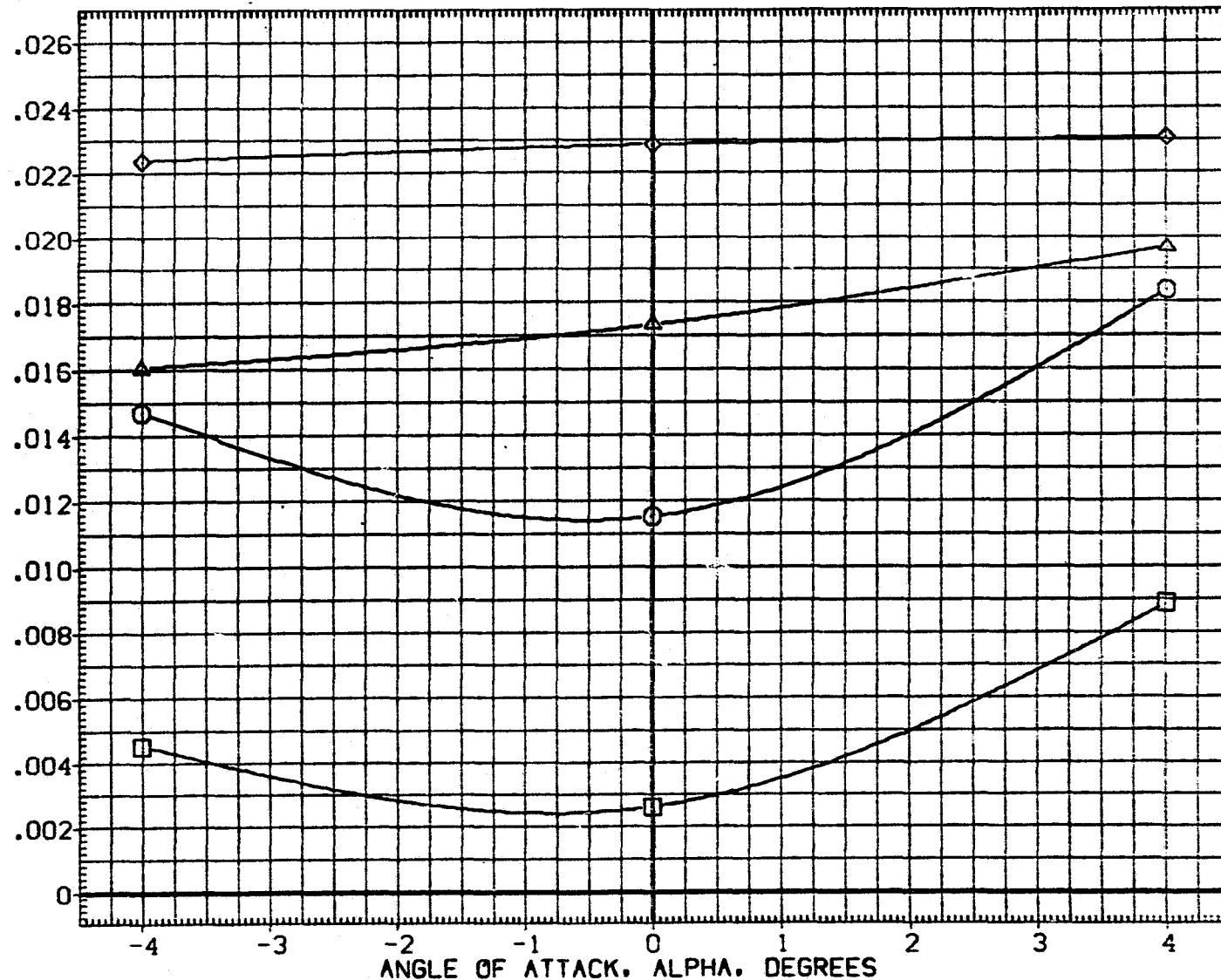


FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4XA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4X96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4X80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

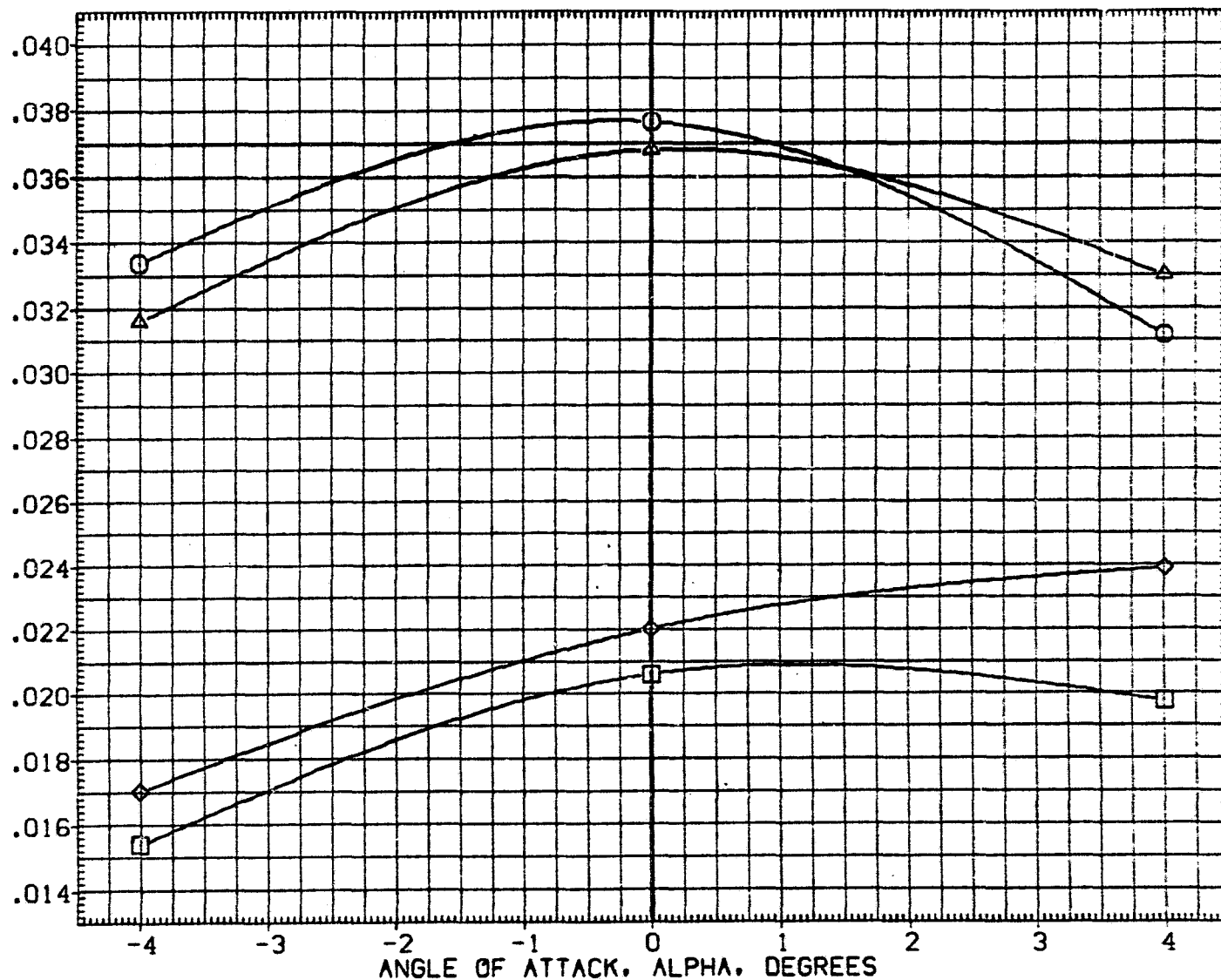


FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF 2690.0000 SQ.FT.
(RE4X88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF 1290.3000 IN.
(RE4X59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF 1290.3000 IN.
(RE4X70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

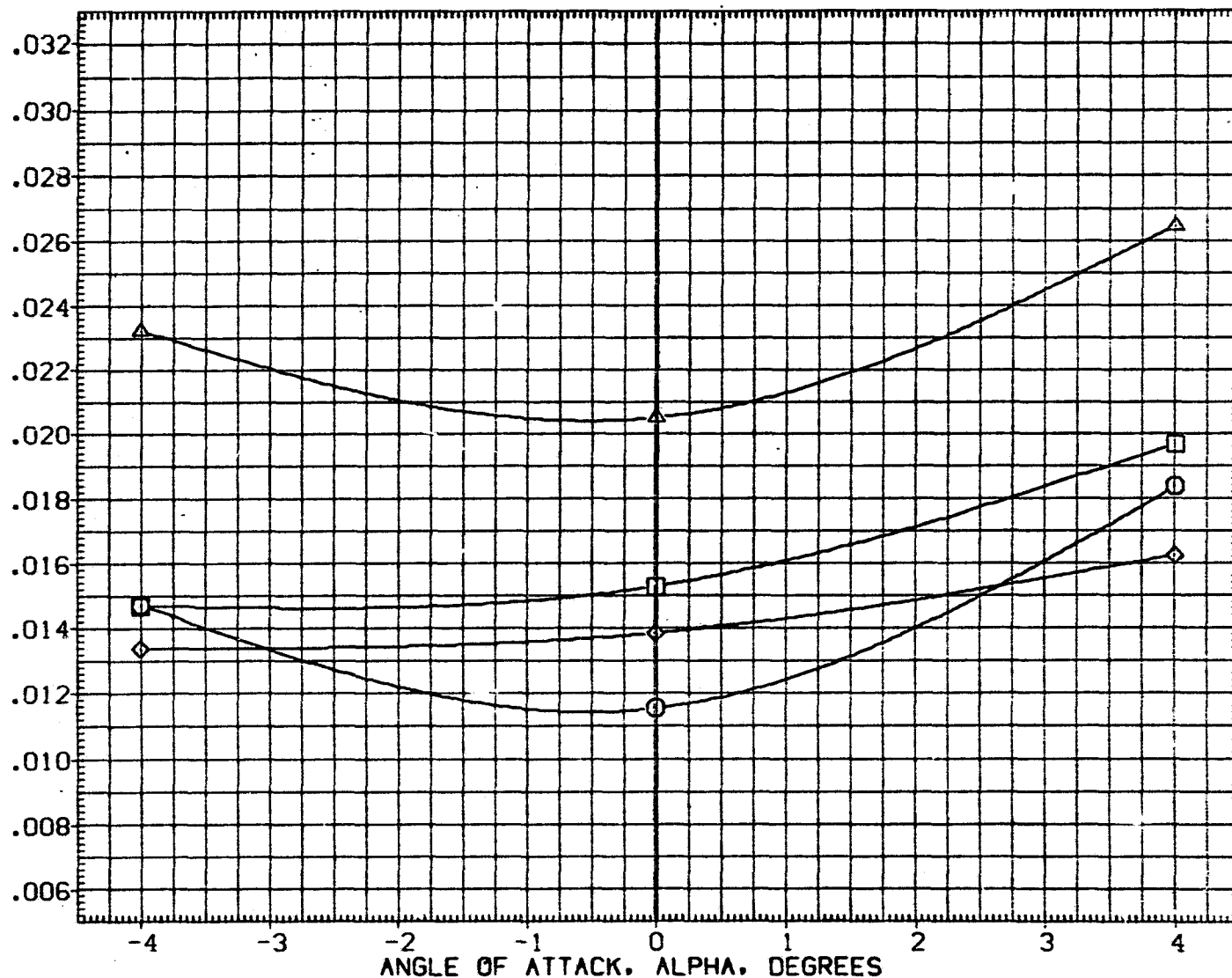


FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4X59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4X70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

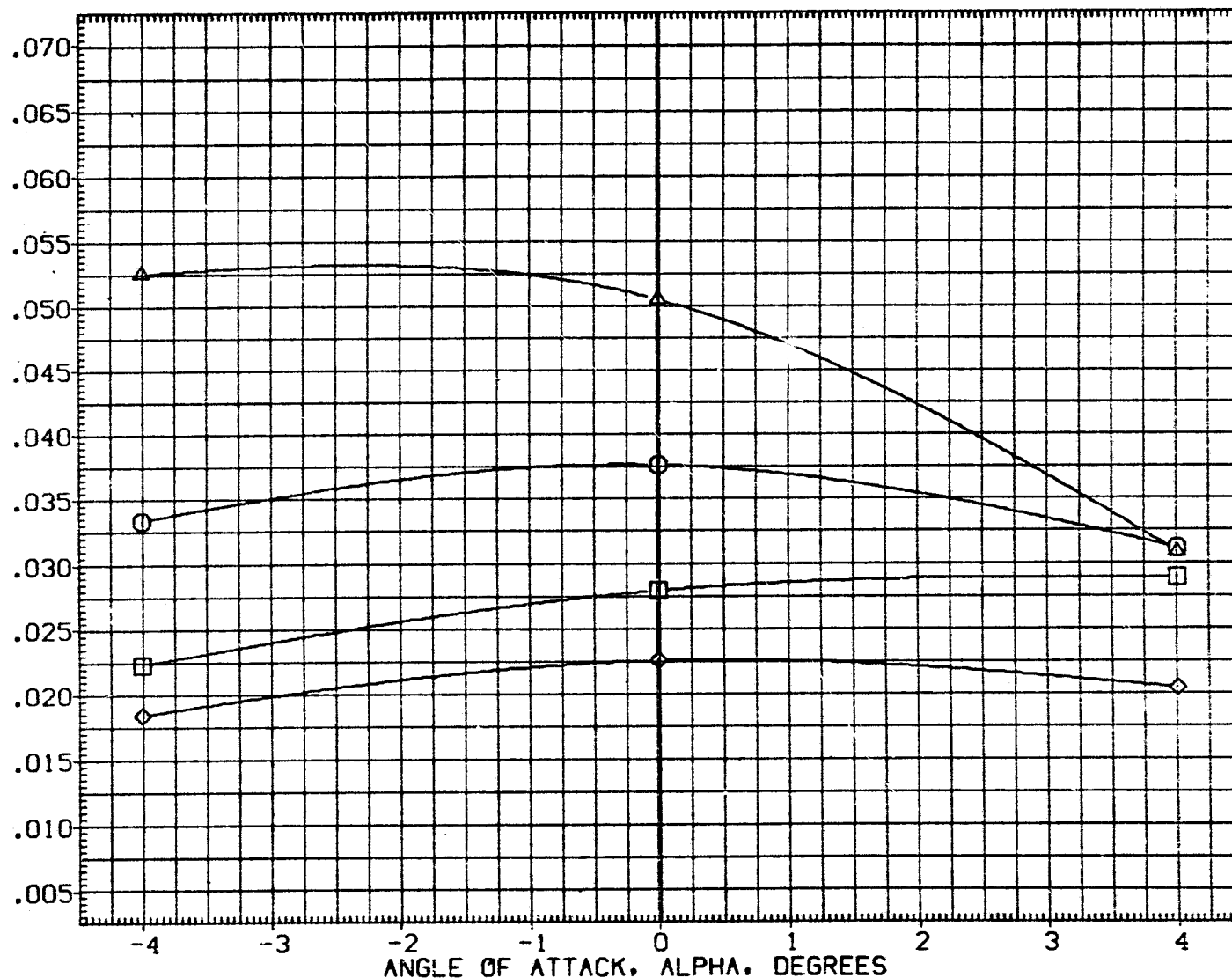


FIG. 30 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=0.9 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4XA7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X97)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X81)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

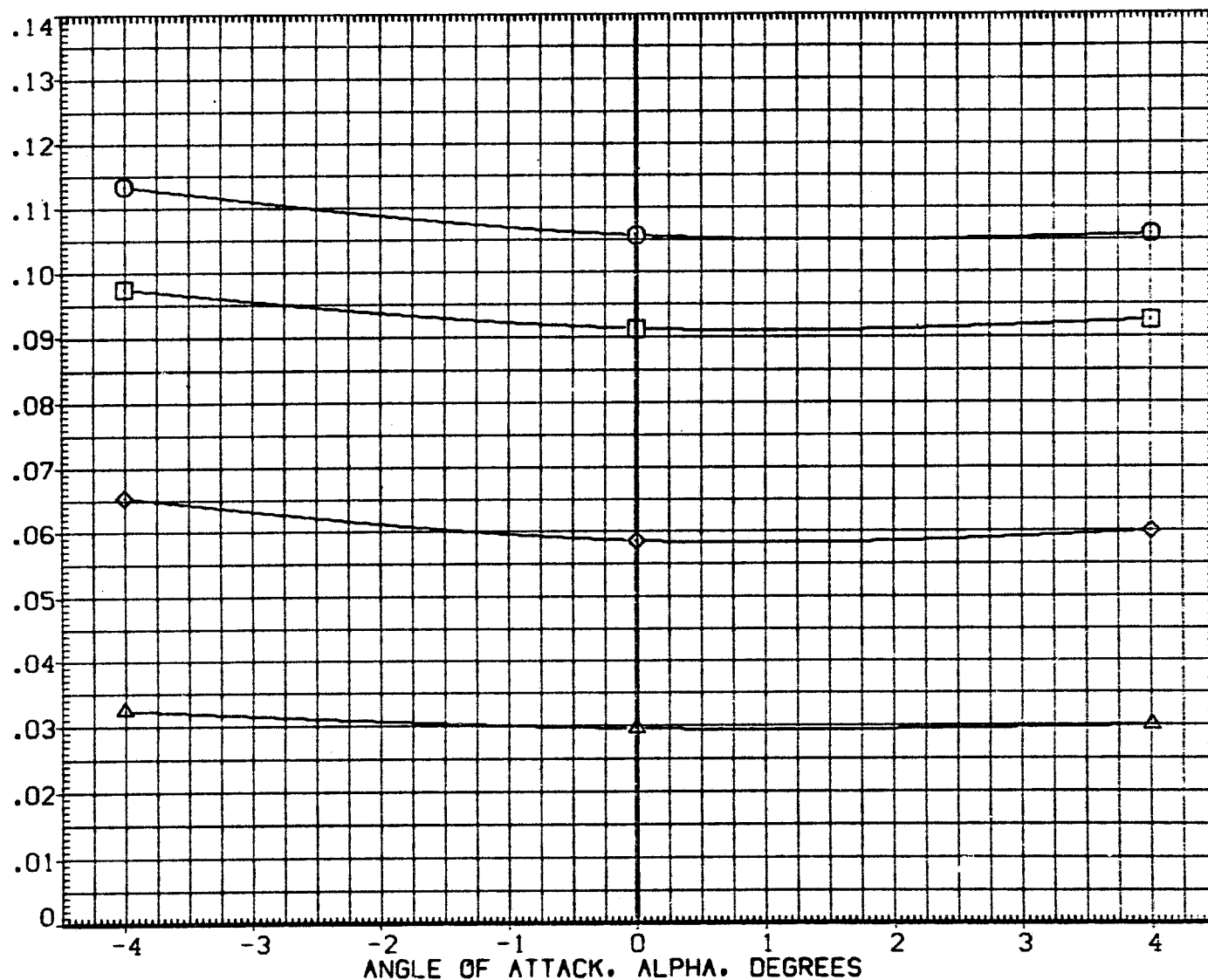


FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4XA7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X97)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4XB1)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0250	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

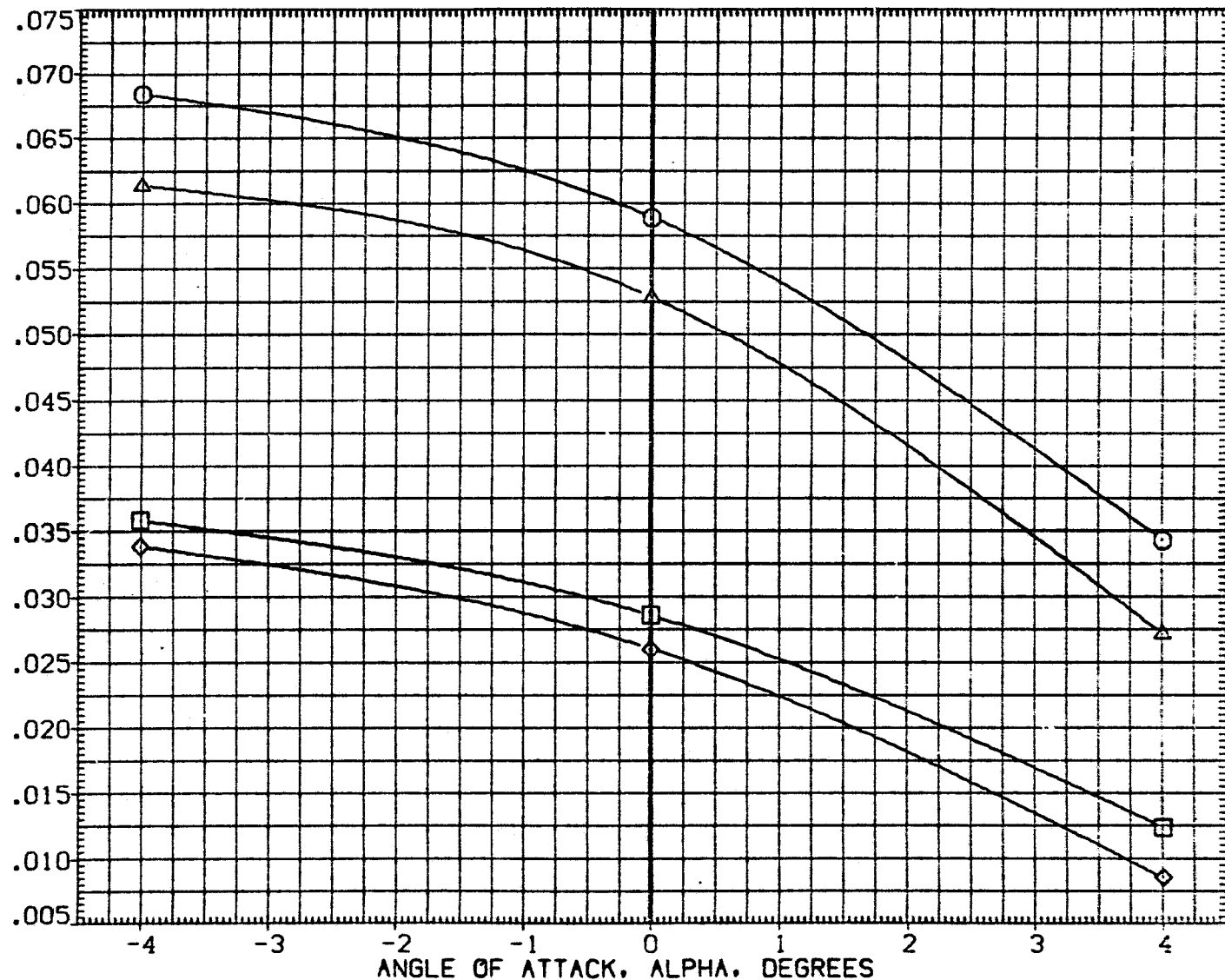


FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

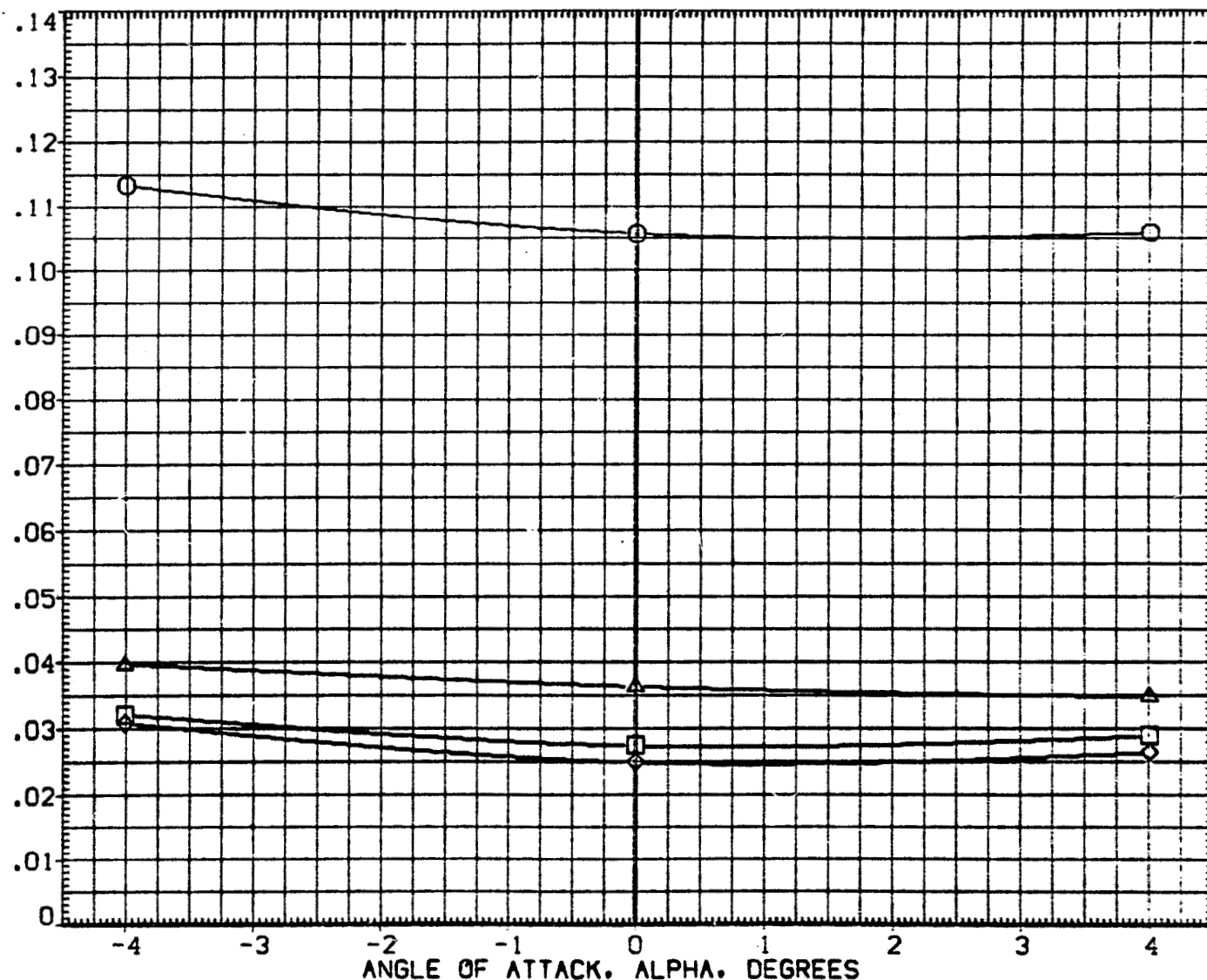


FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

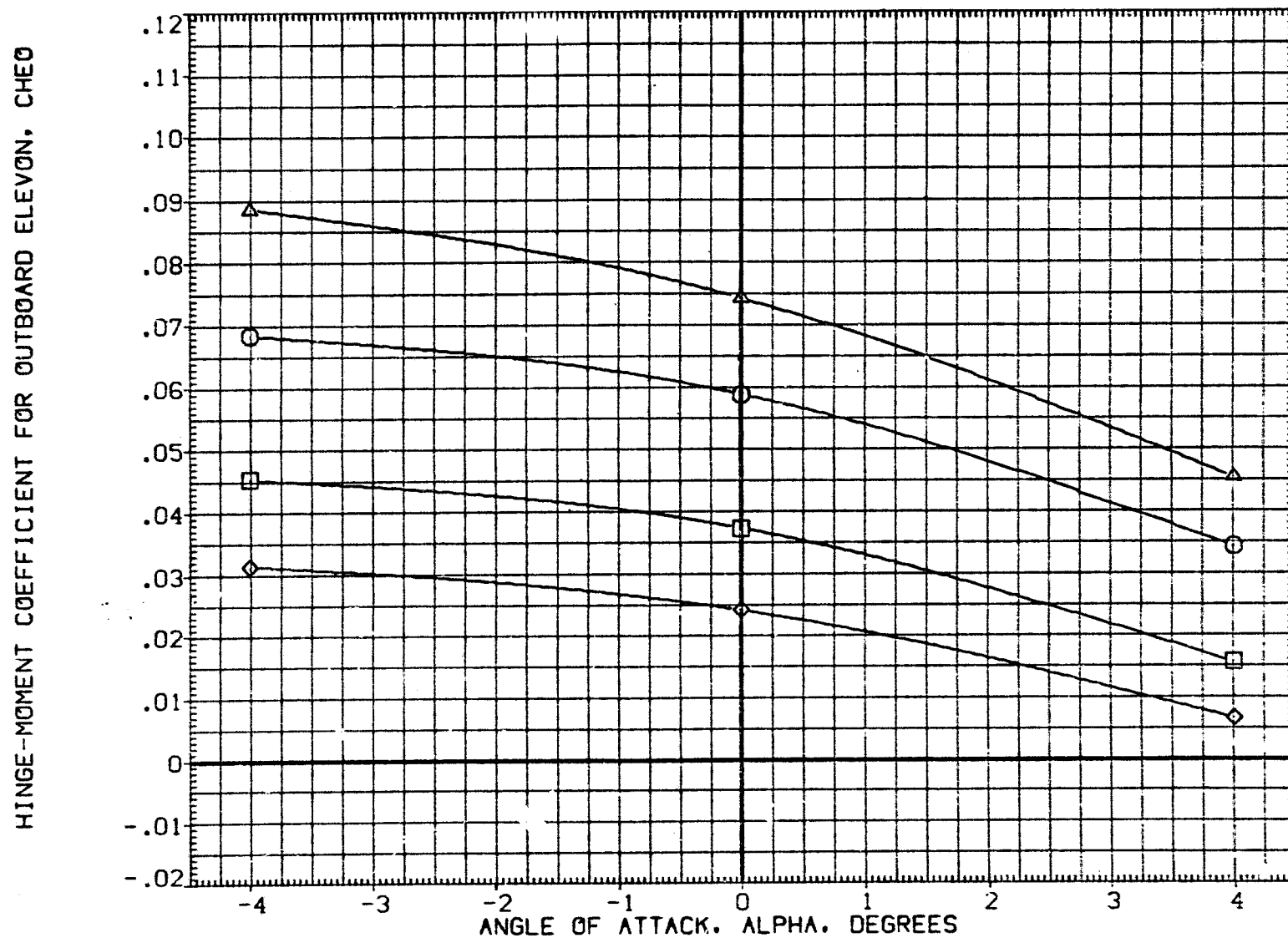


FIG. 31 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.1 PLUME ON
 (A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4XAB)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON. CHEI

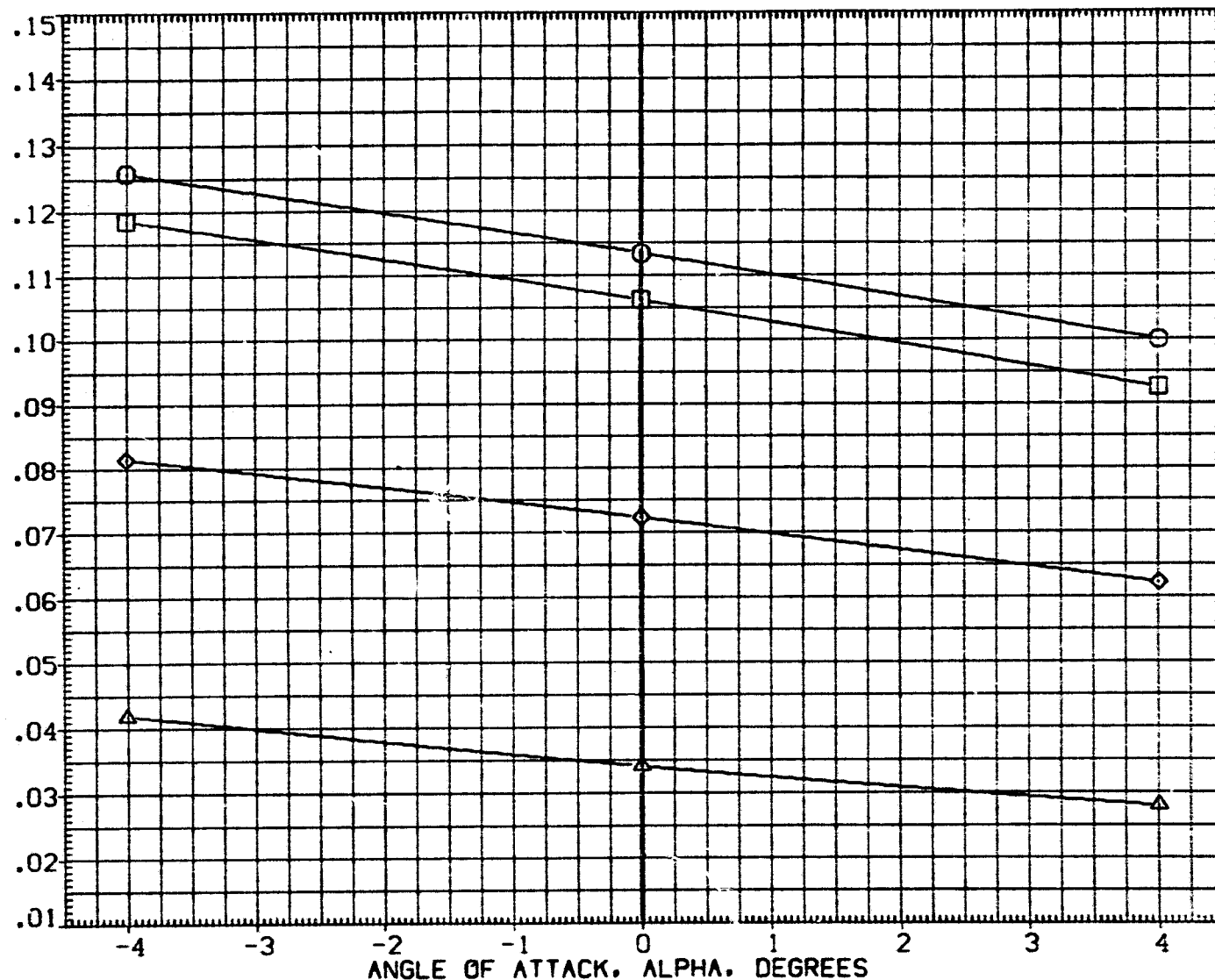


FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.25 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4X8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

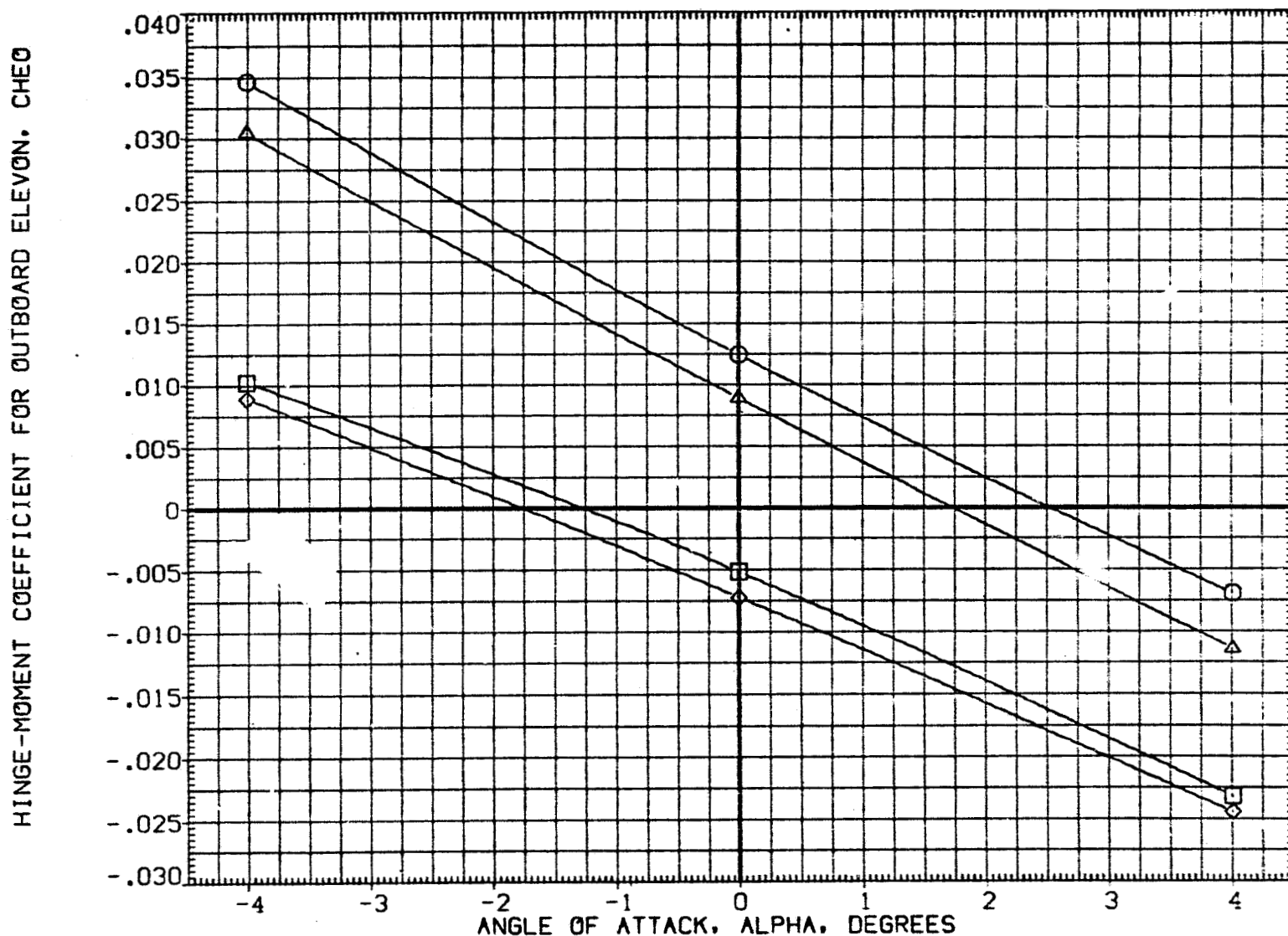


FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.25 PLUME ON
(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
(RE4X23)	○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
(RE4X61)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF 1290.3000 IN.
(RE4X72)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF 1290.3000 IN.
							XMRP .0000 IN.
							YMRP .0000 IN.
							ZMRP .0000 IN.
							SCALE .0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

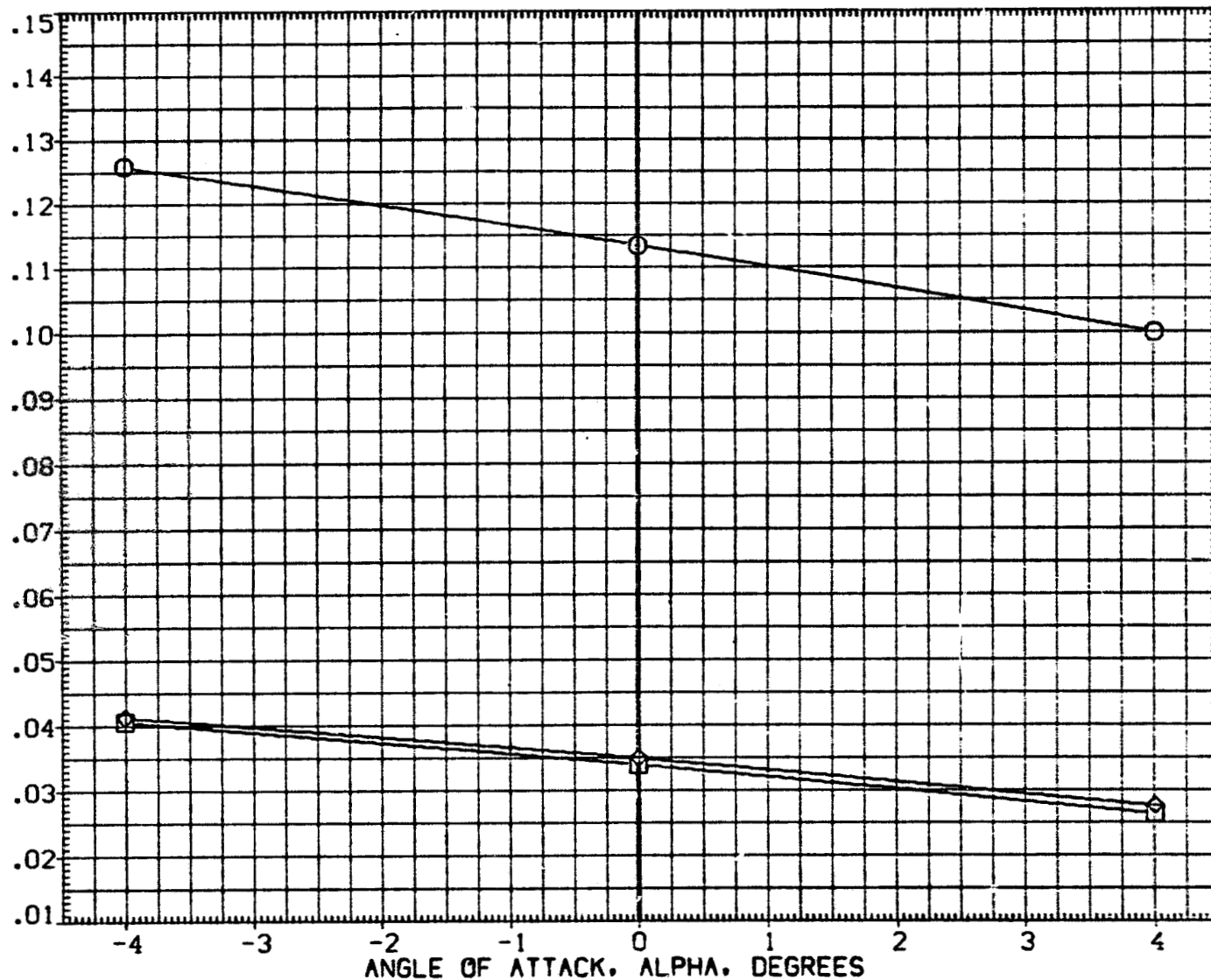


FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.25 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X61)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X72)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

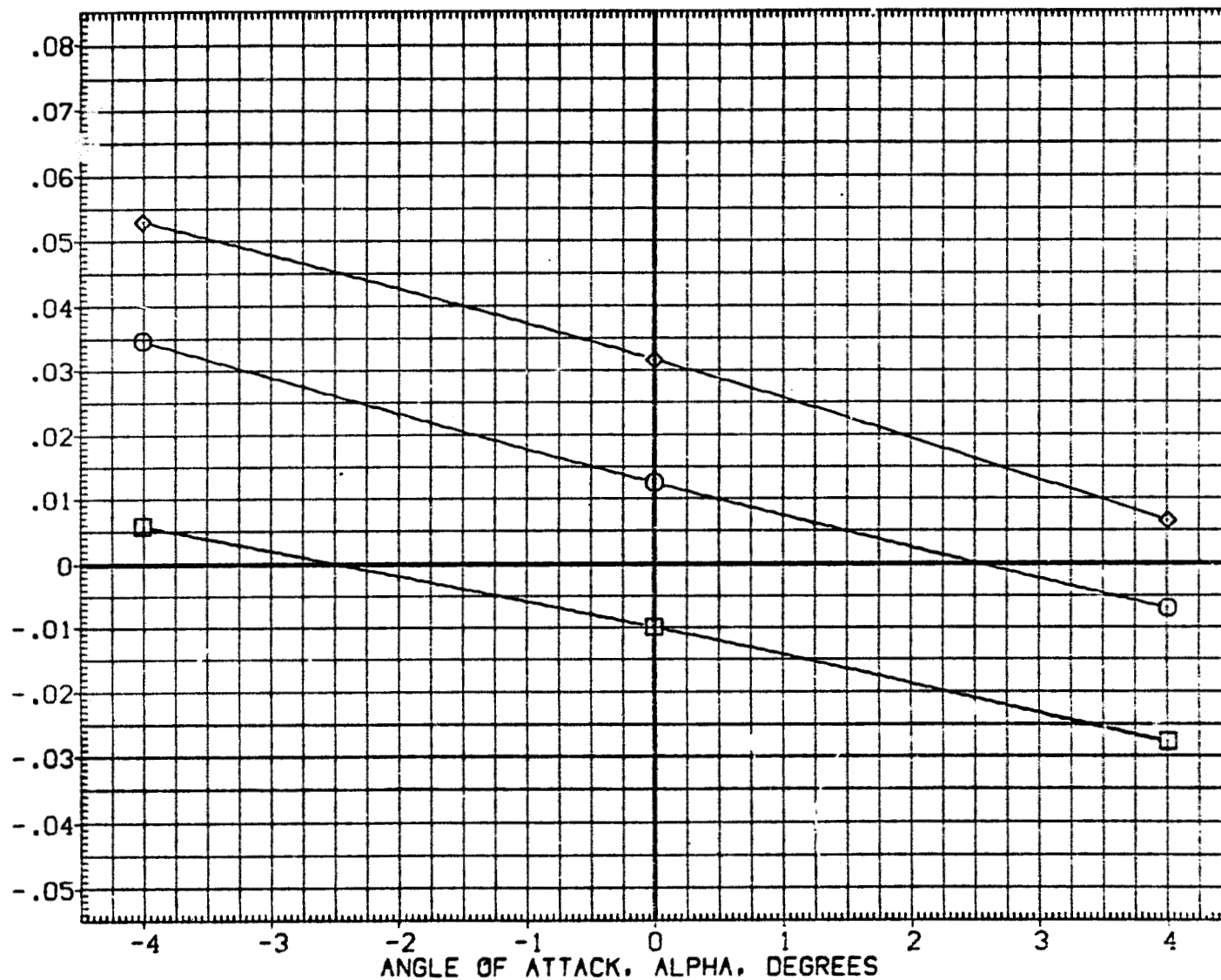


FIG. 32 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, $M=1.25$ PLUME ON
(A) $\beta = .00$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-TB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4XA9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X99)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4X83)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

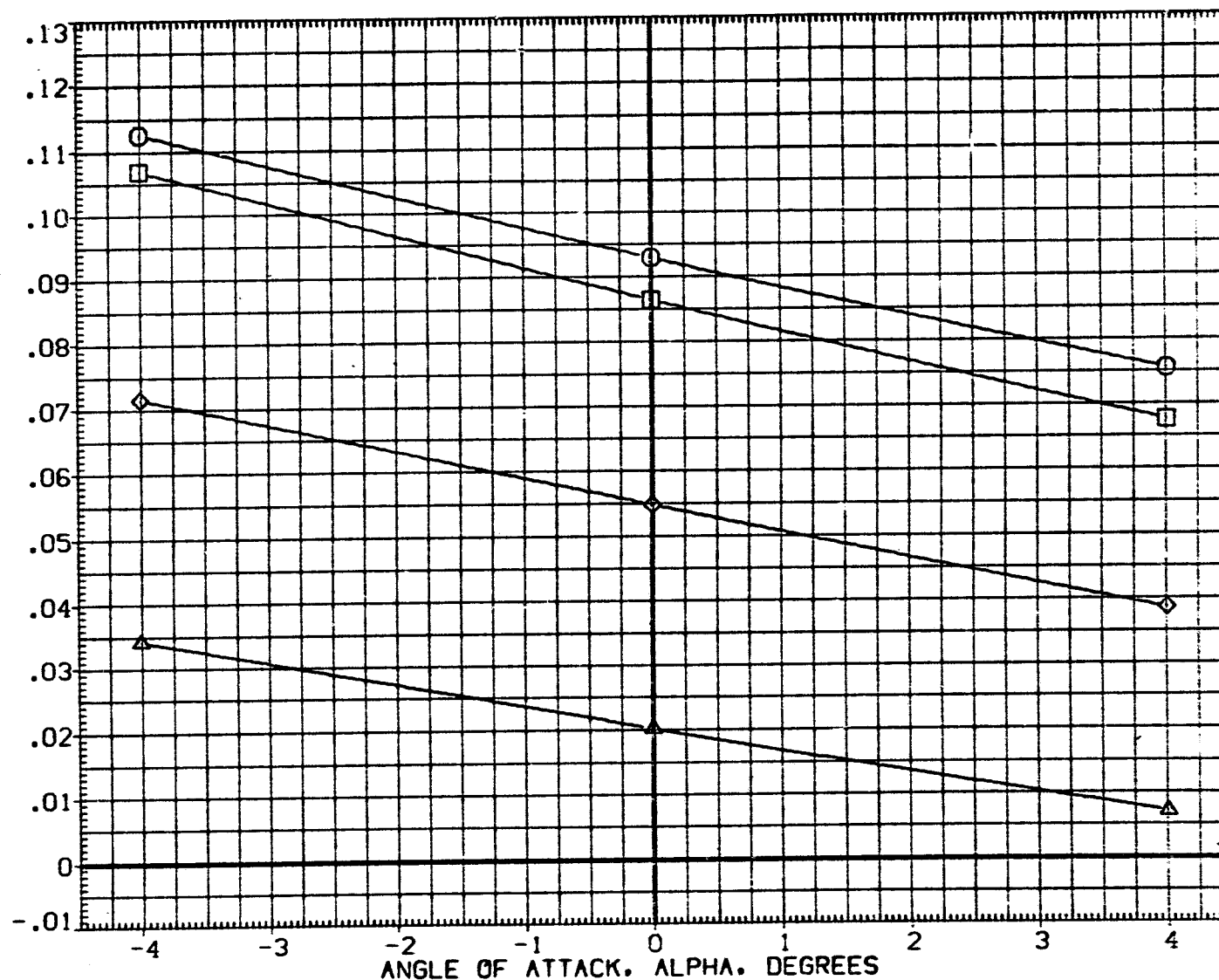


FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUKE ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4XA9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X99)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4XB3)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

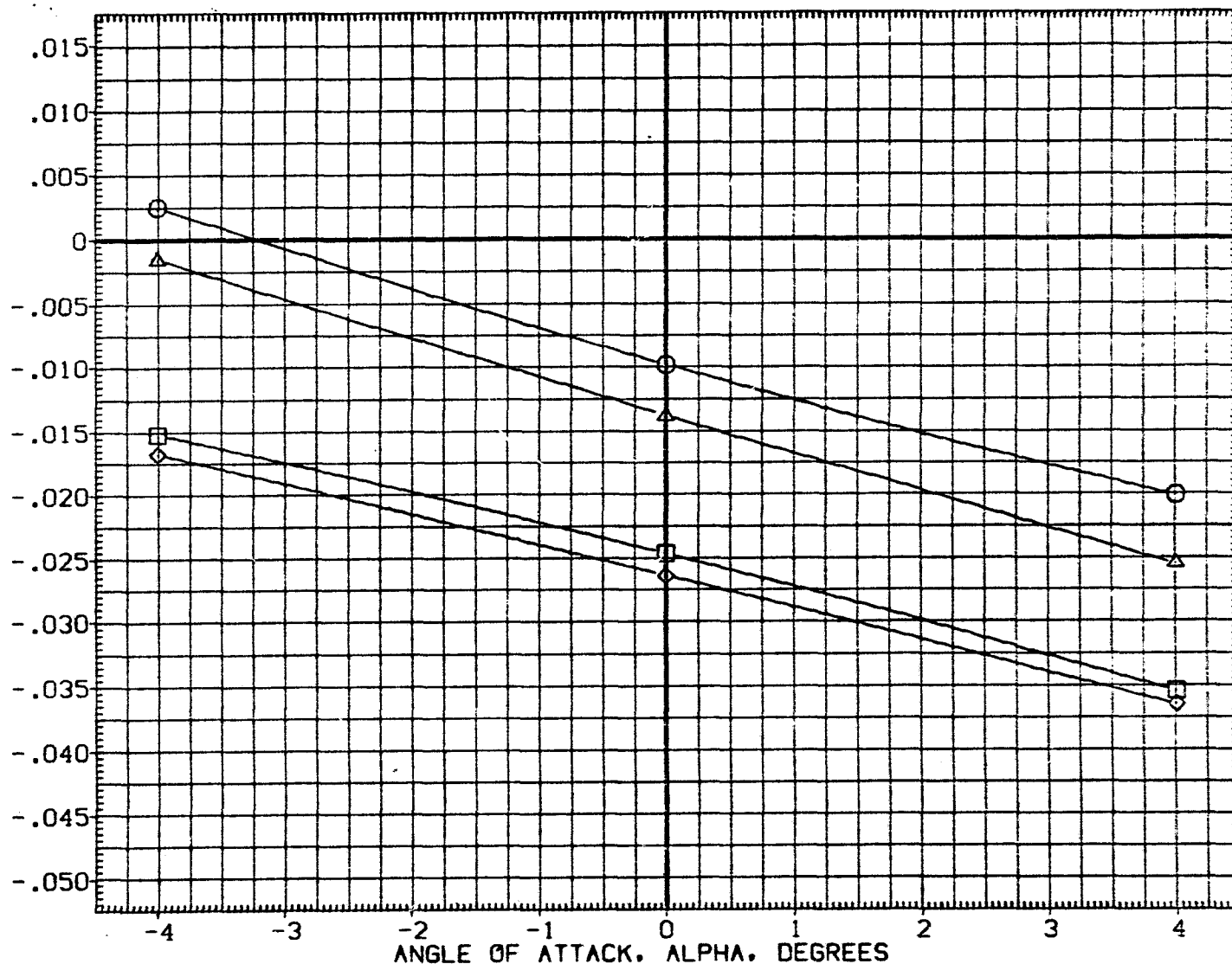


FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4X62)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	LREF 1290.3000 IN.
				BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

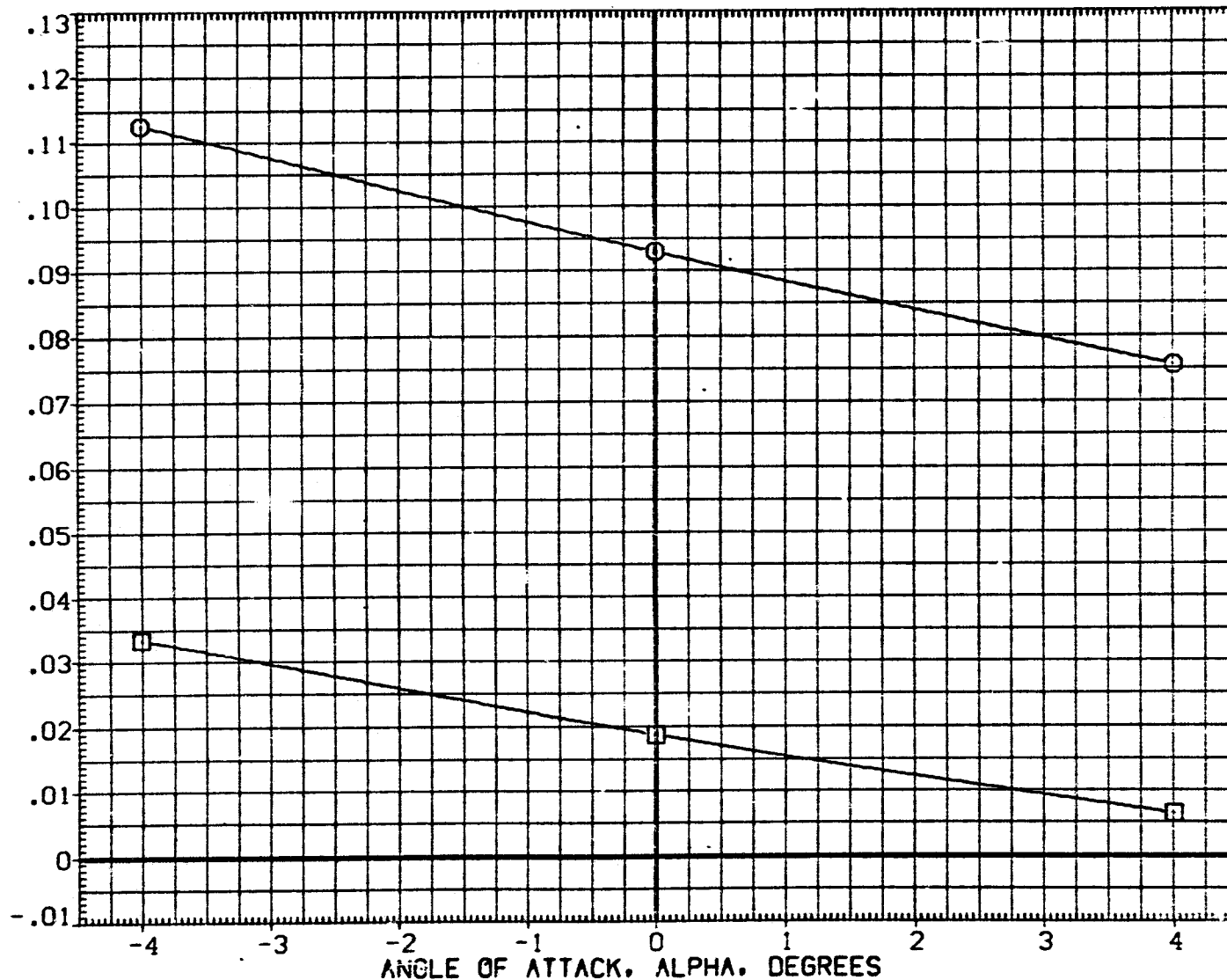


FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X24) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4X62) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	LREF 1290.3000 IN.
				BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

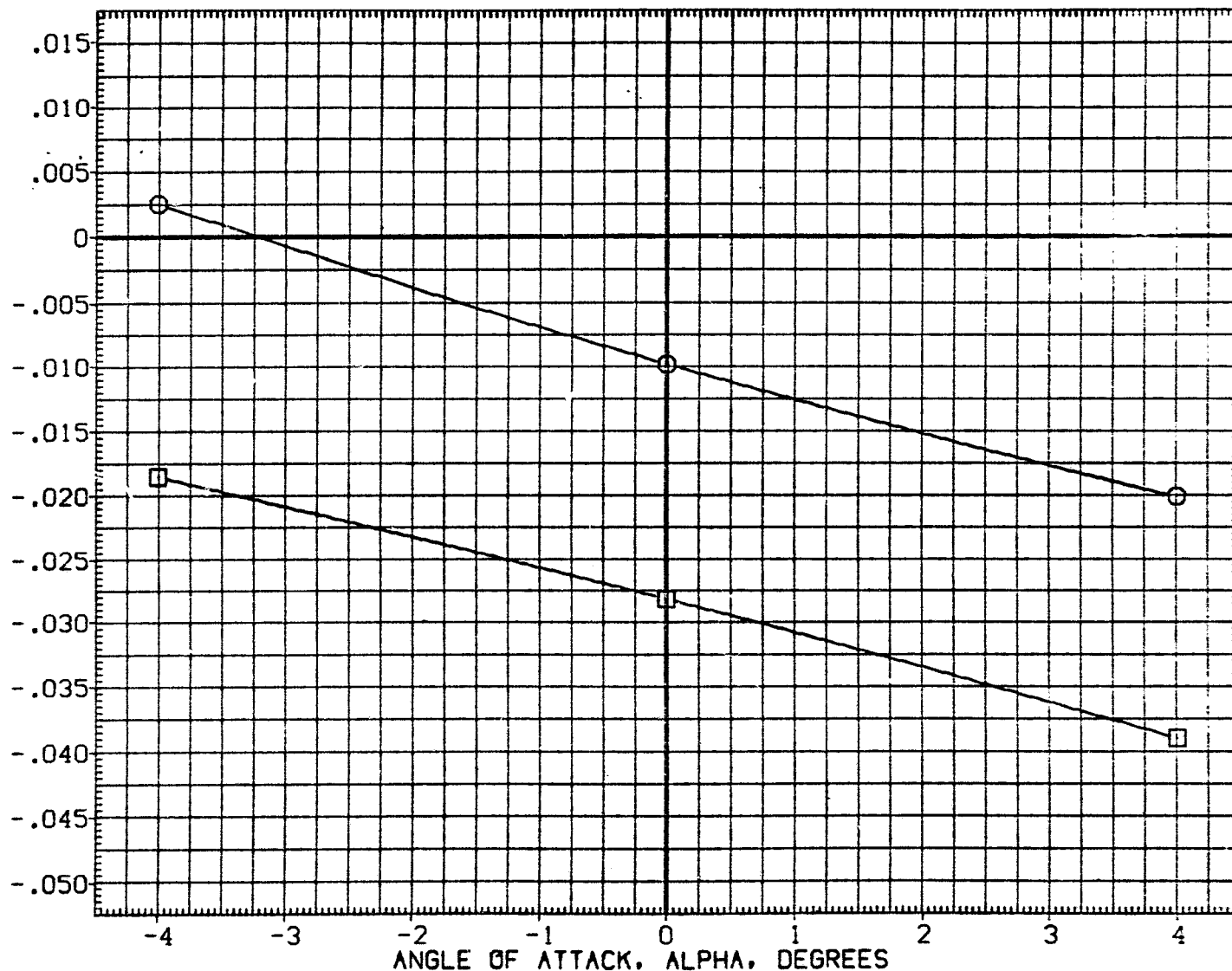


FIG. 33 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN PITCH, M=1.4 PLUME ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4YA5)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y95)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y79)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

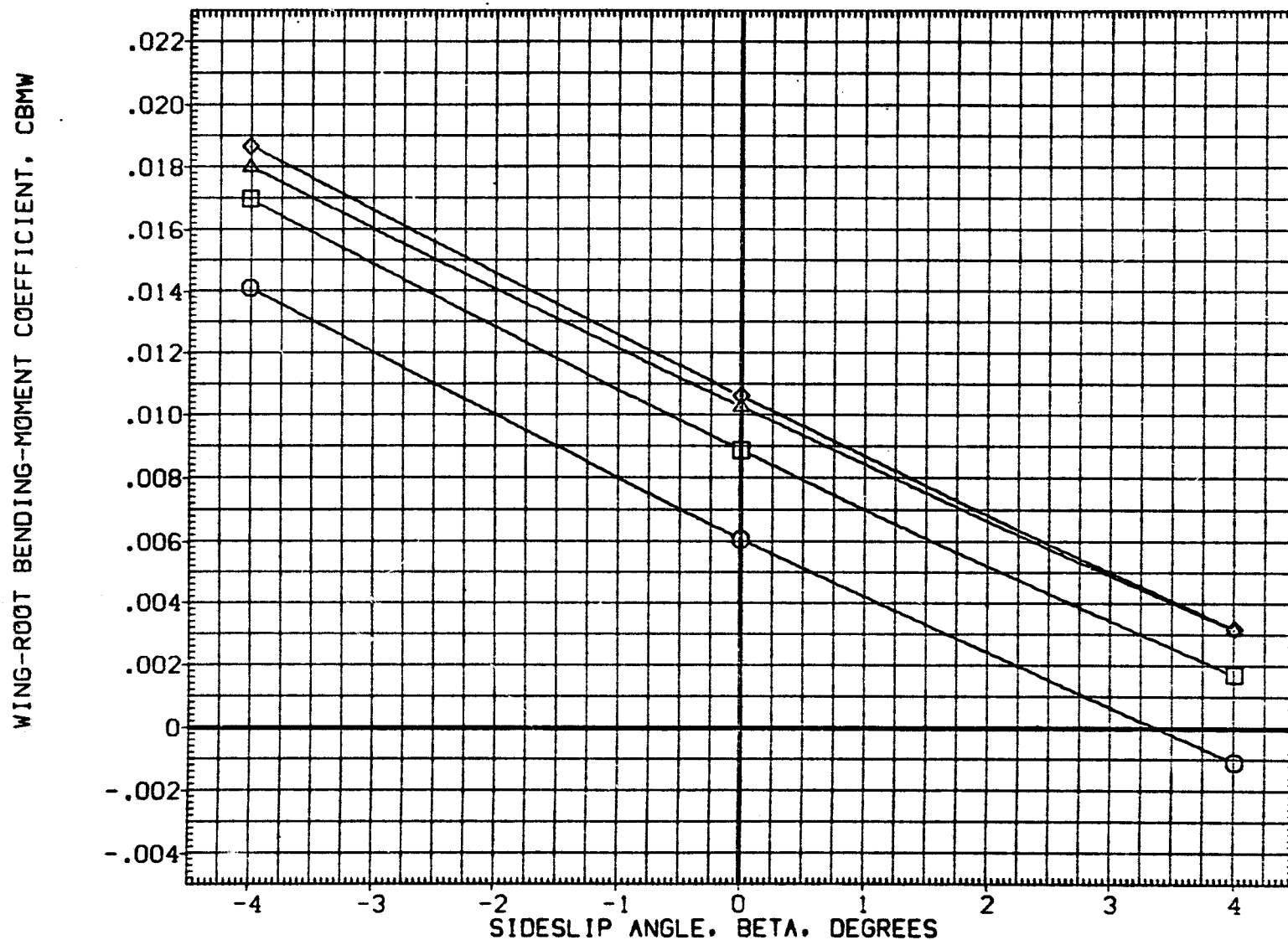


FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4YA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

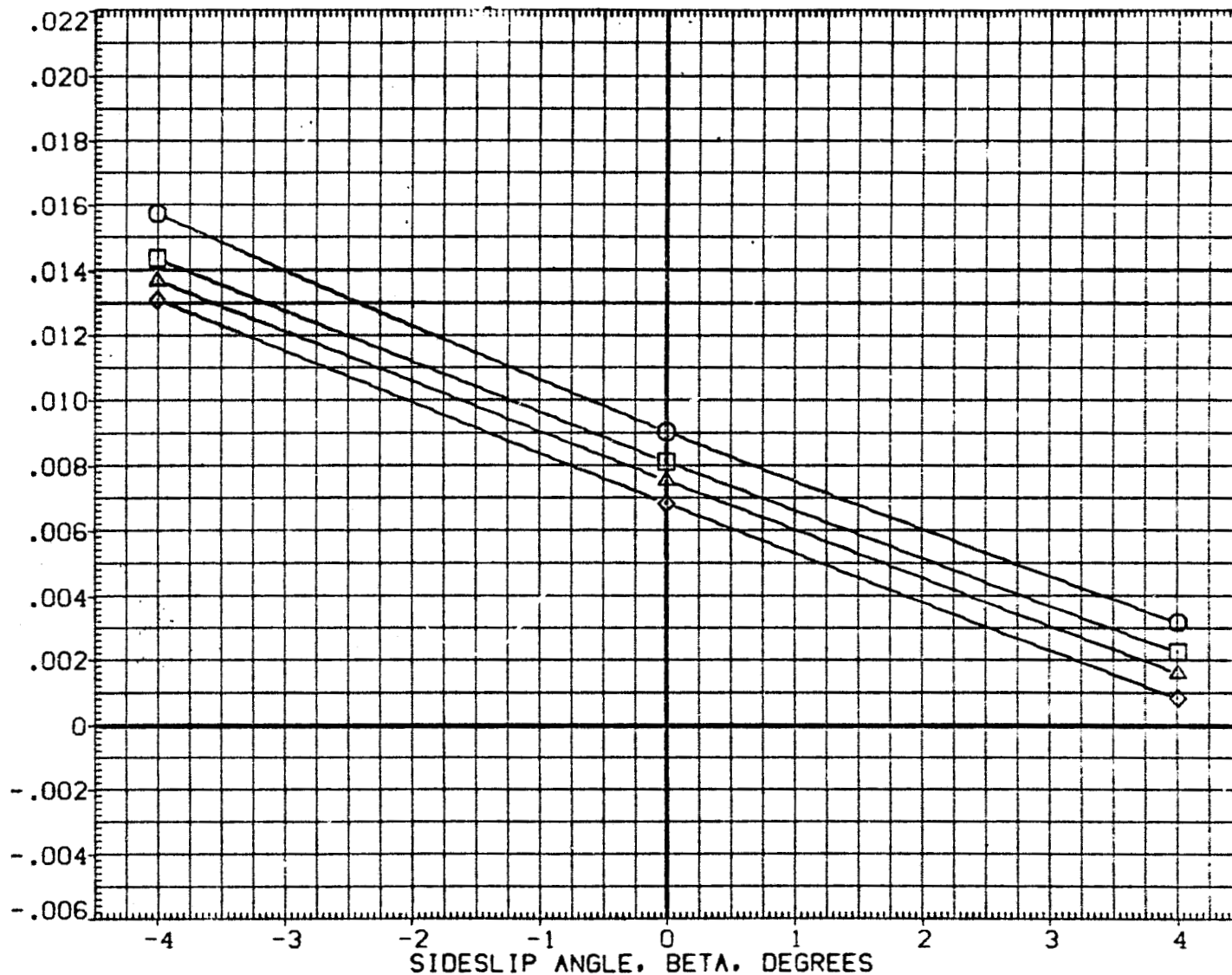


FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4YA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

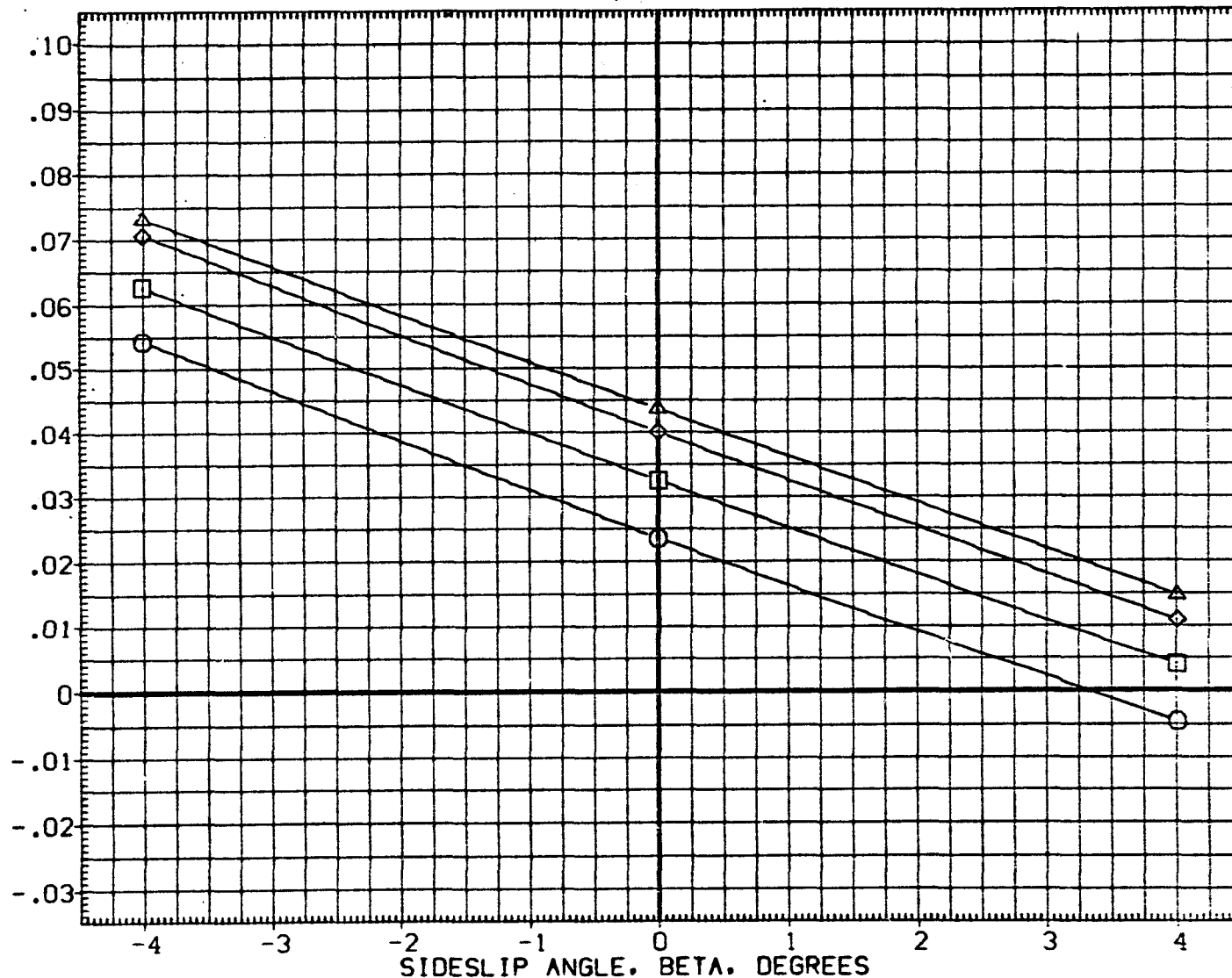


FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6

(A) ALPHA = .00

PLUMES ON

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

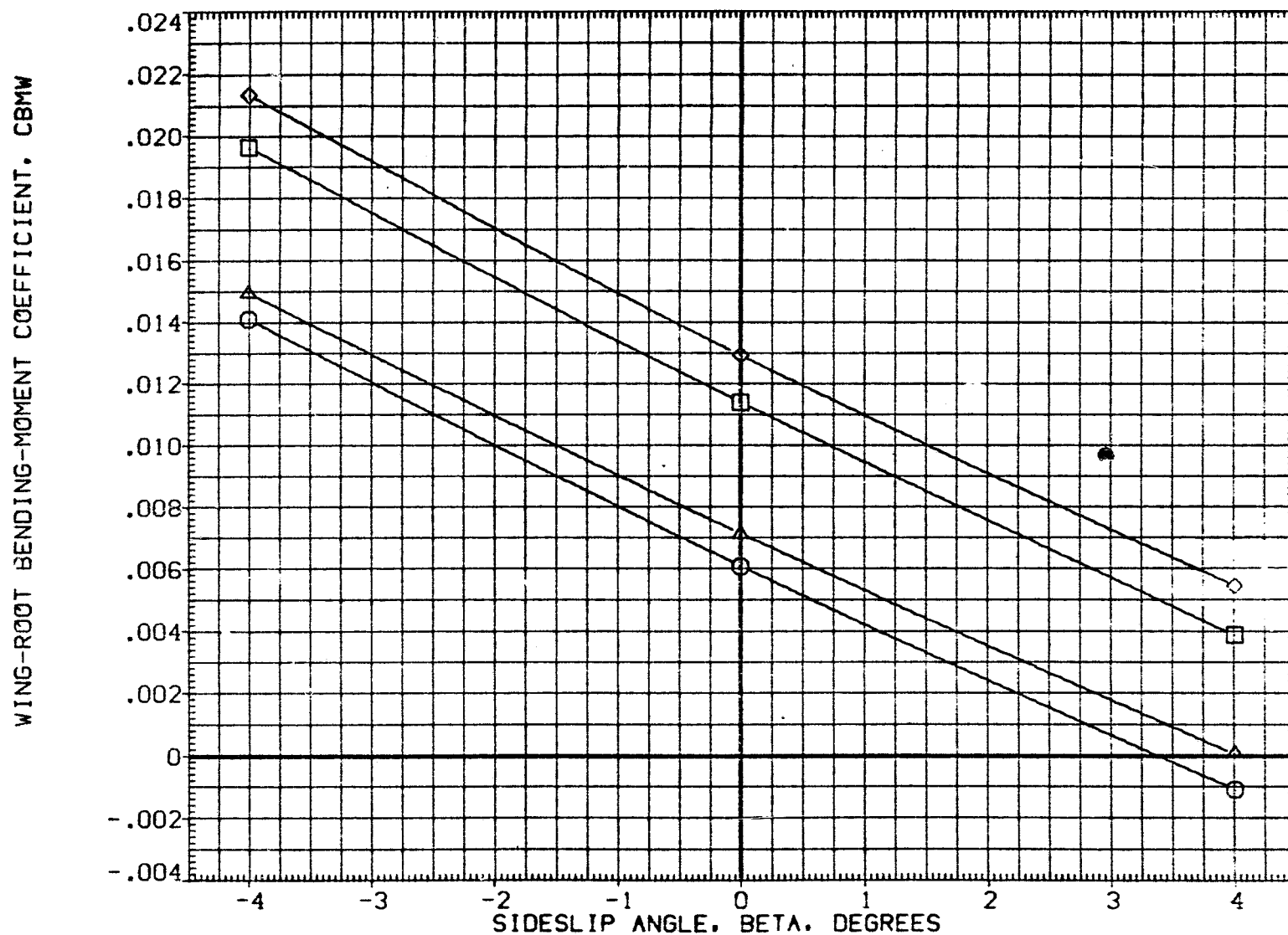


FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6

(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

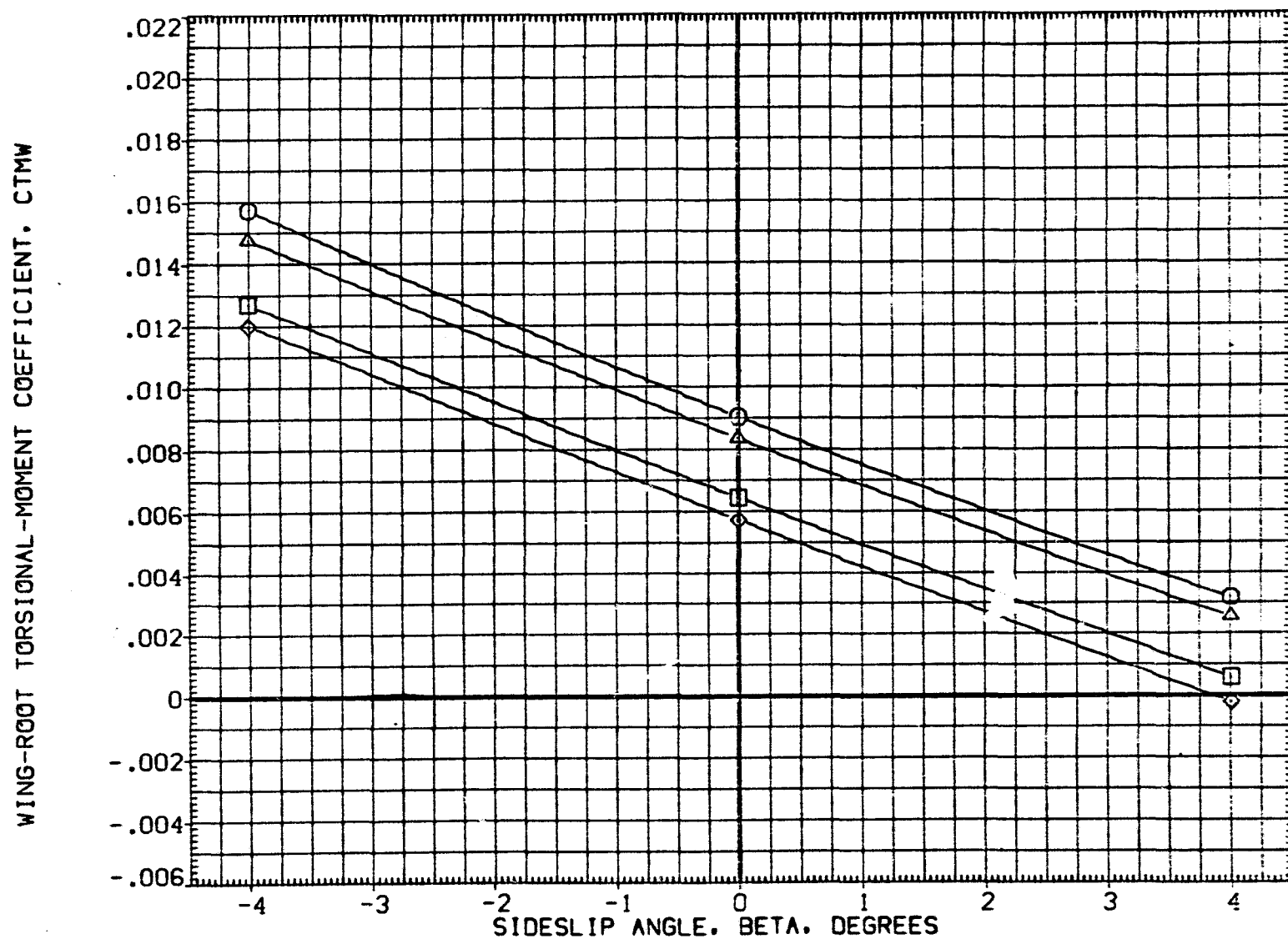


FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y87)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y58)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y69)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

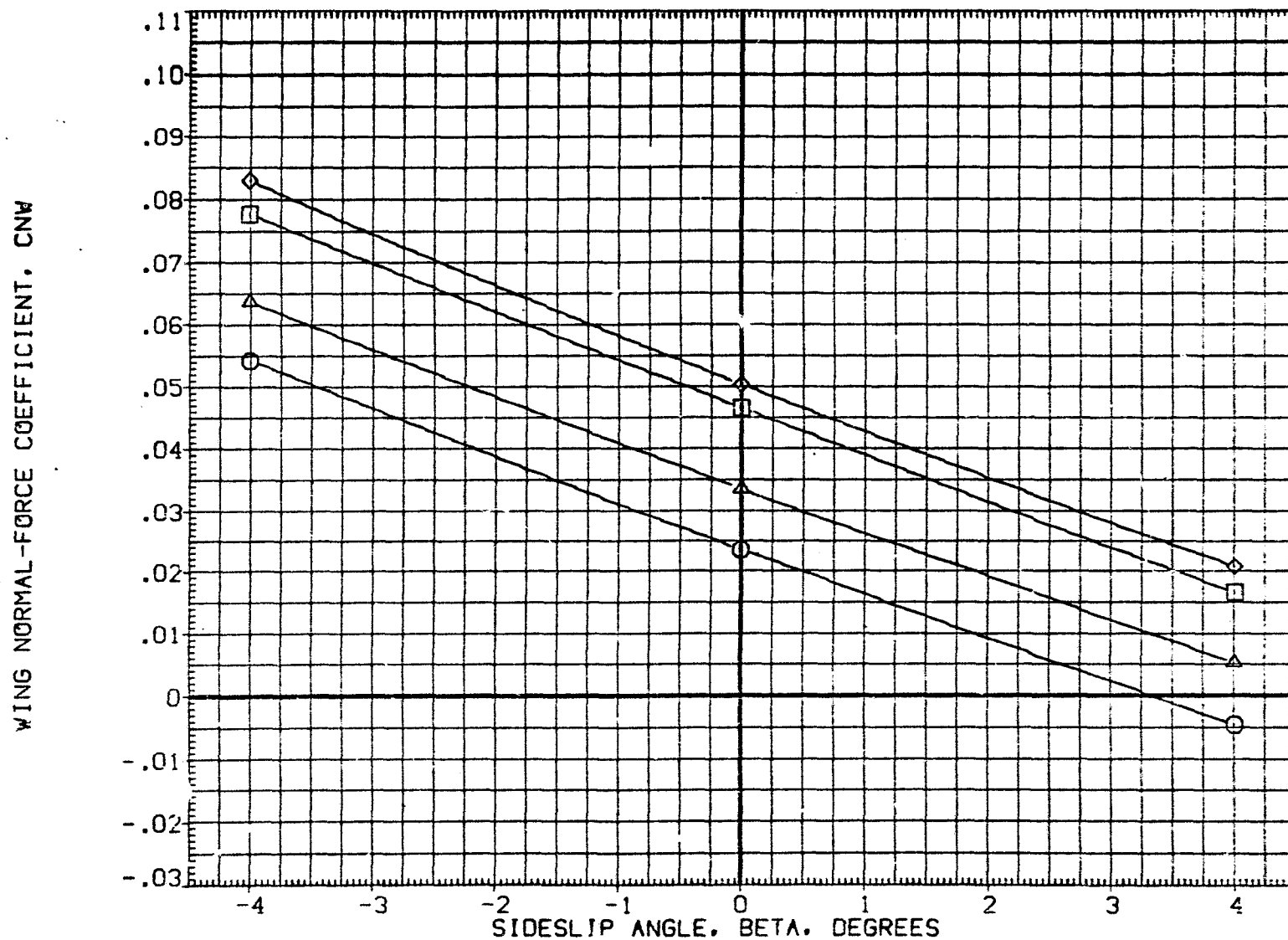


FIG. 34 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.6
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4YA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

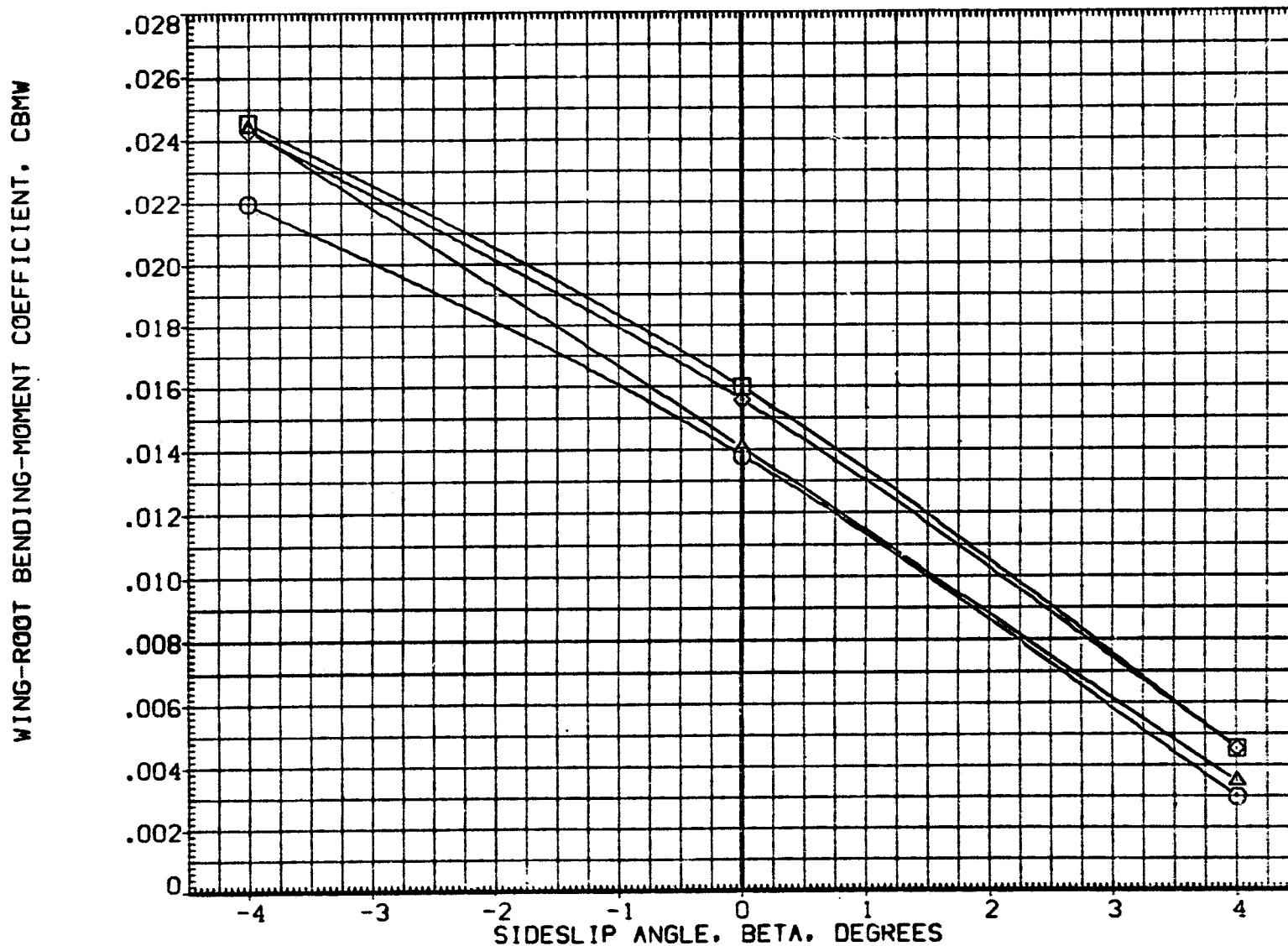


FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9

(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4YA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

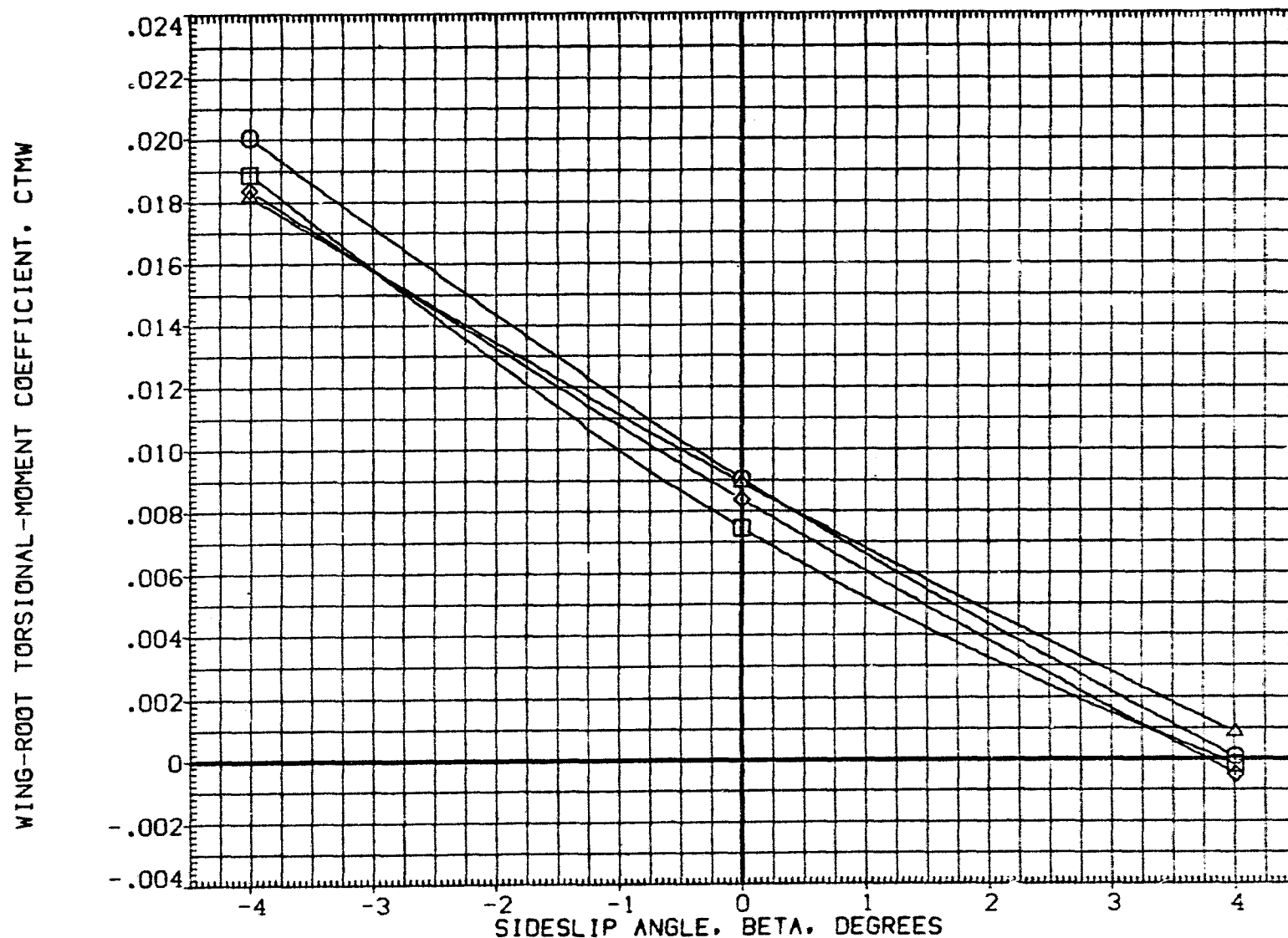


FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4YA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

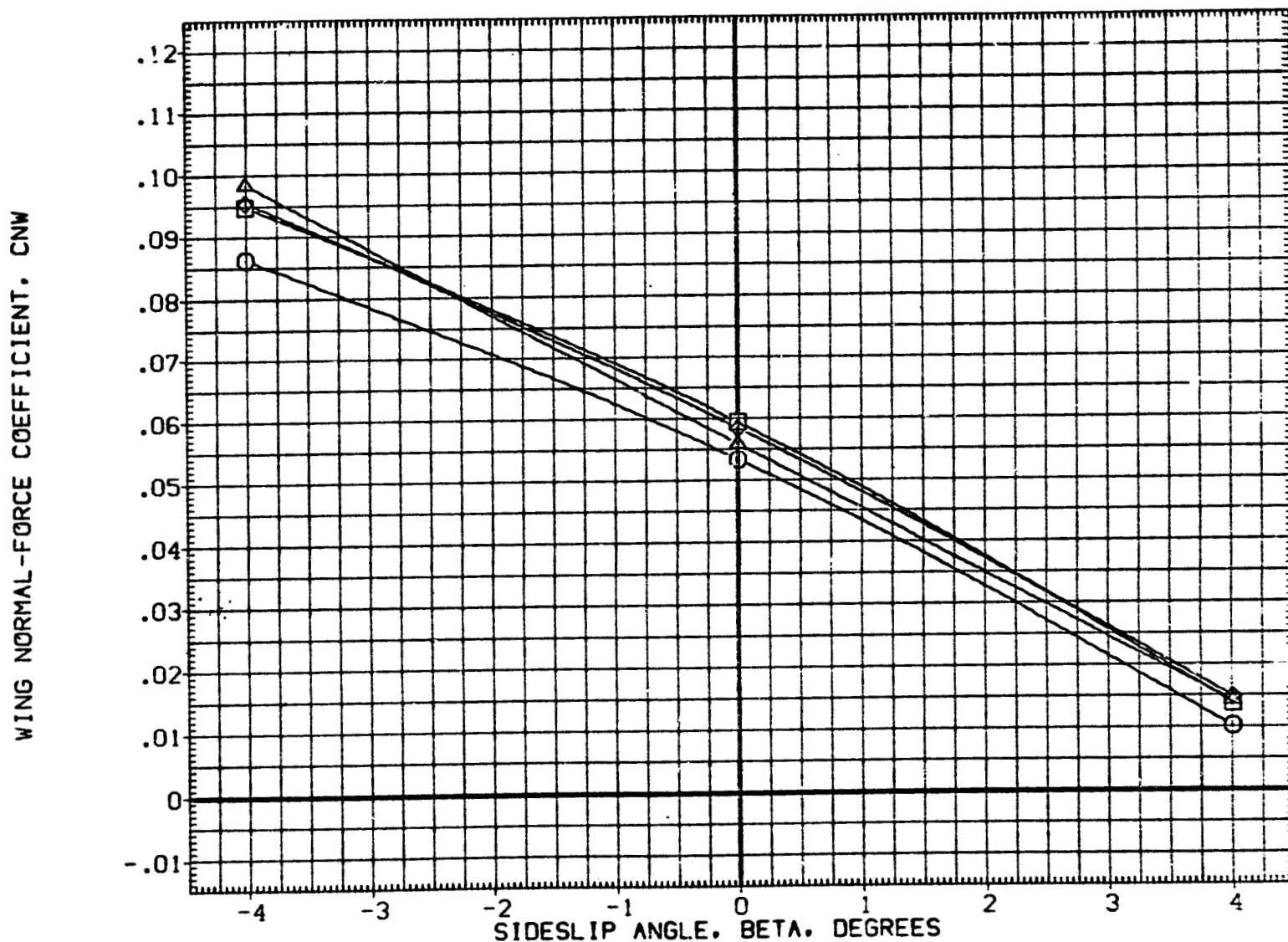


FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y88)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y59)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y70)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

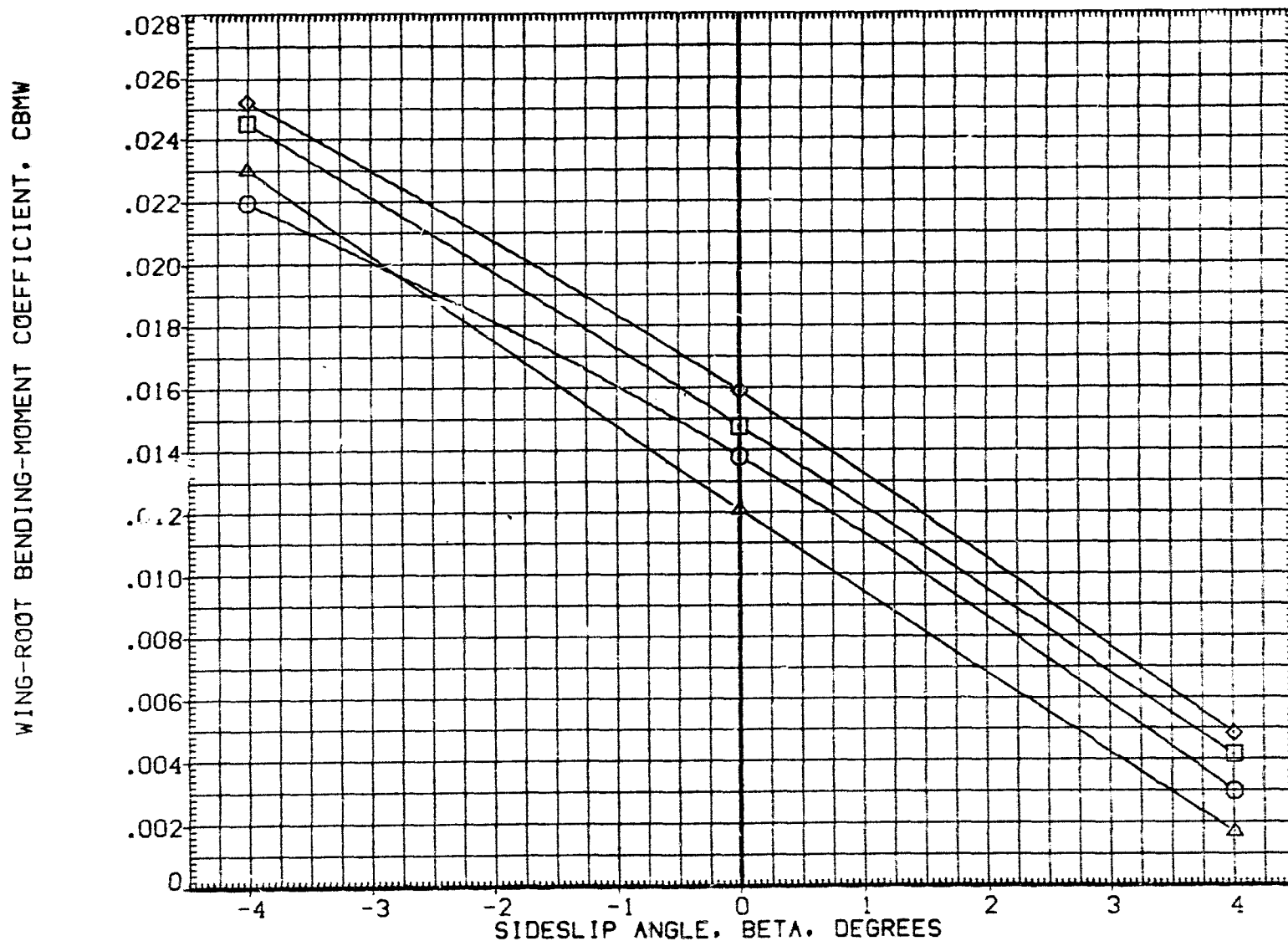


FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1220.3000	IN.
(RE4Y59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

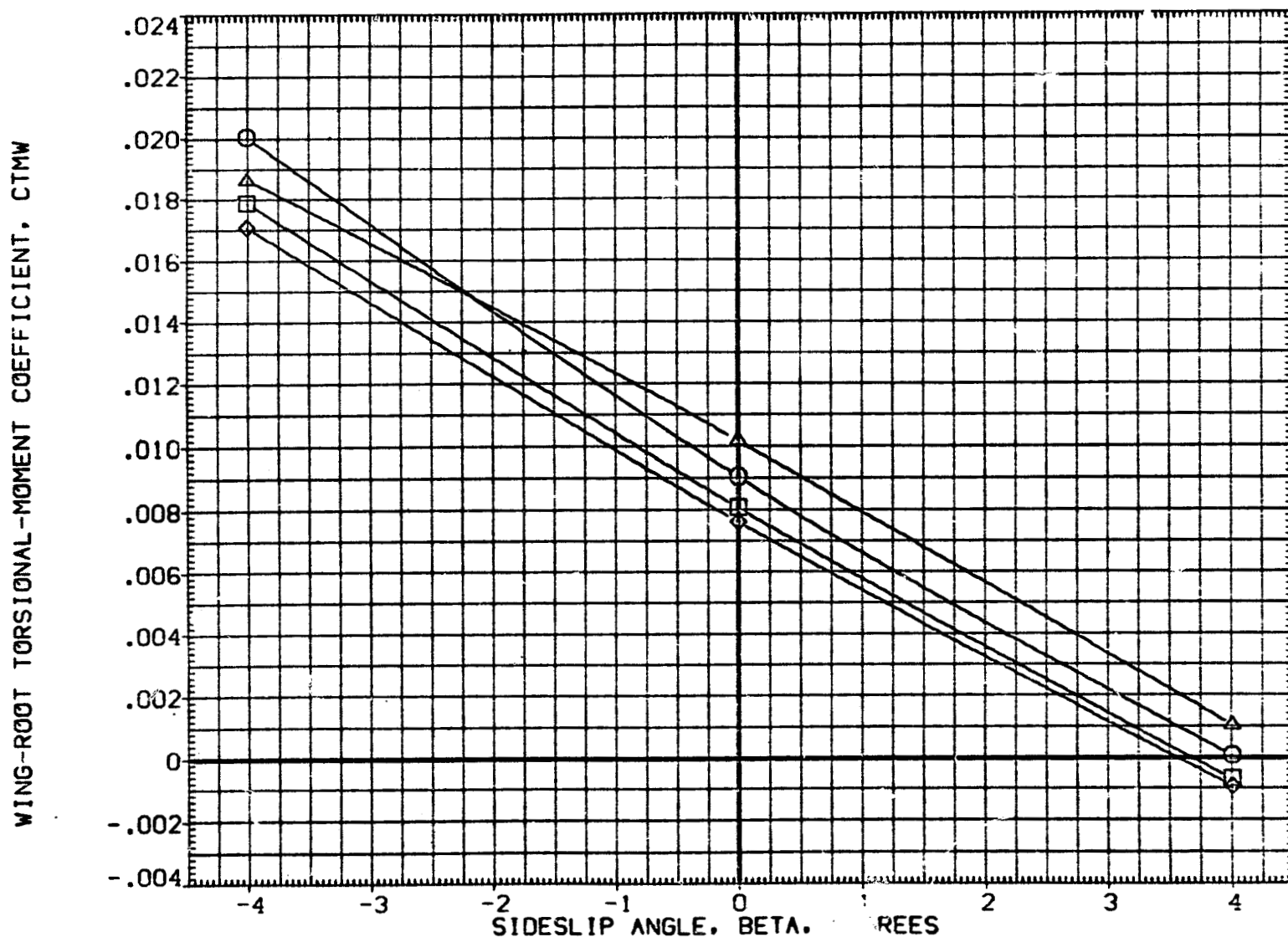


FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN LAW, MACH=0.9
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

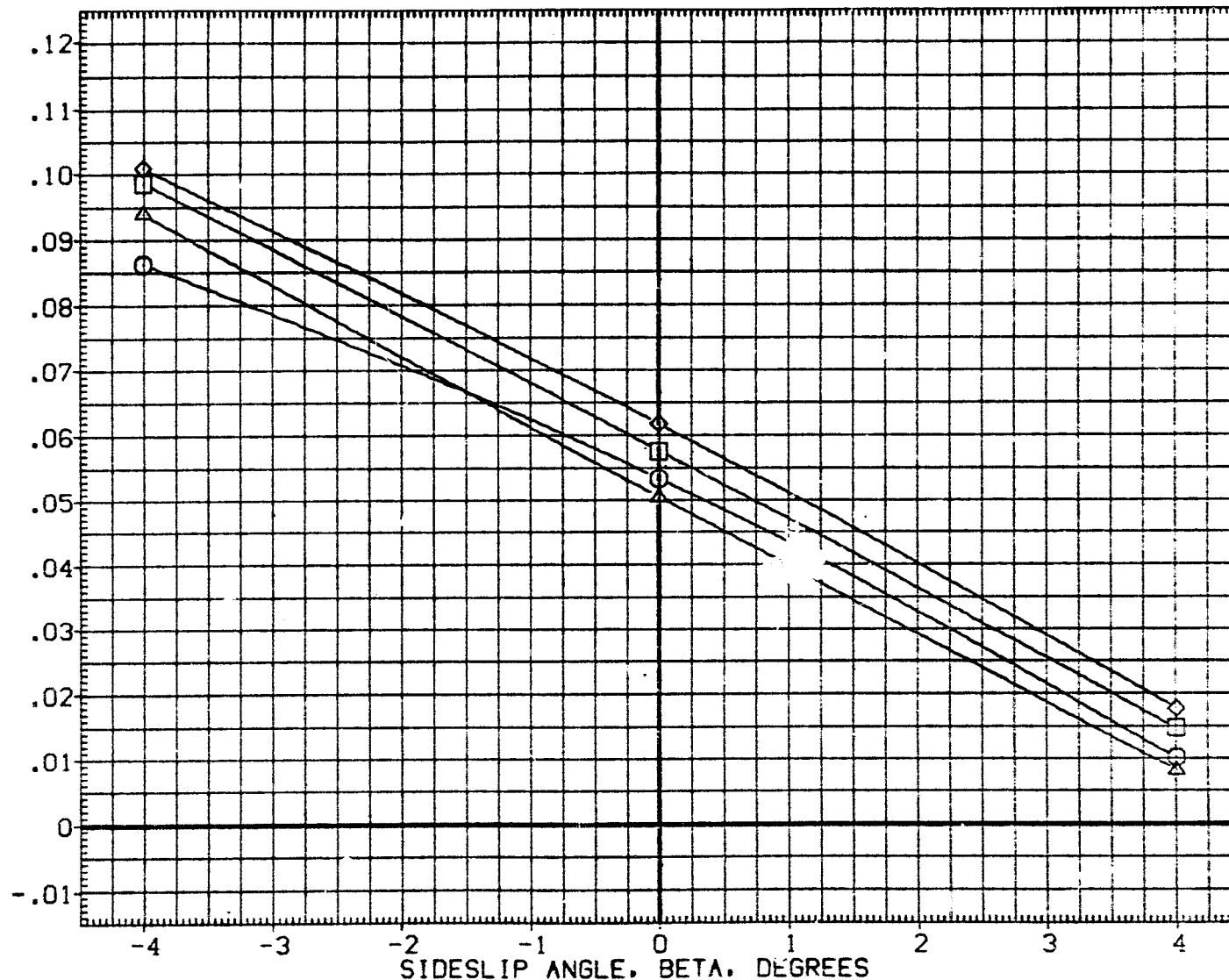


FIG. 35 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4YA7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y97)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4VB1)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

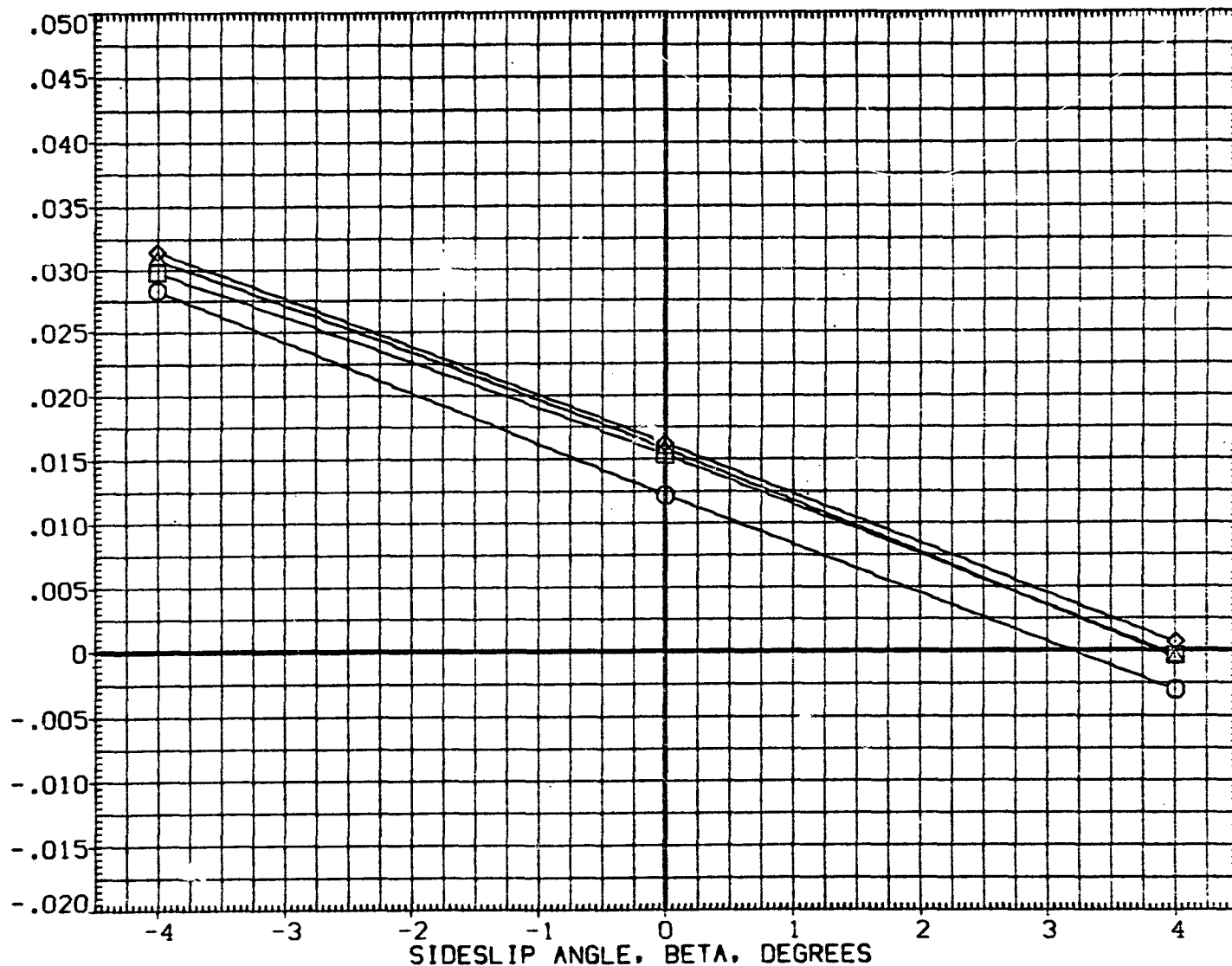






FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-13	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y22) 	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4YA7) 	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y97) 	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y81) 	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

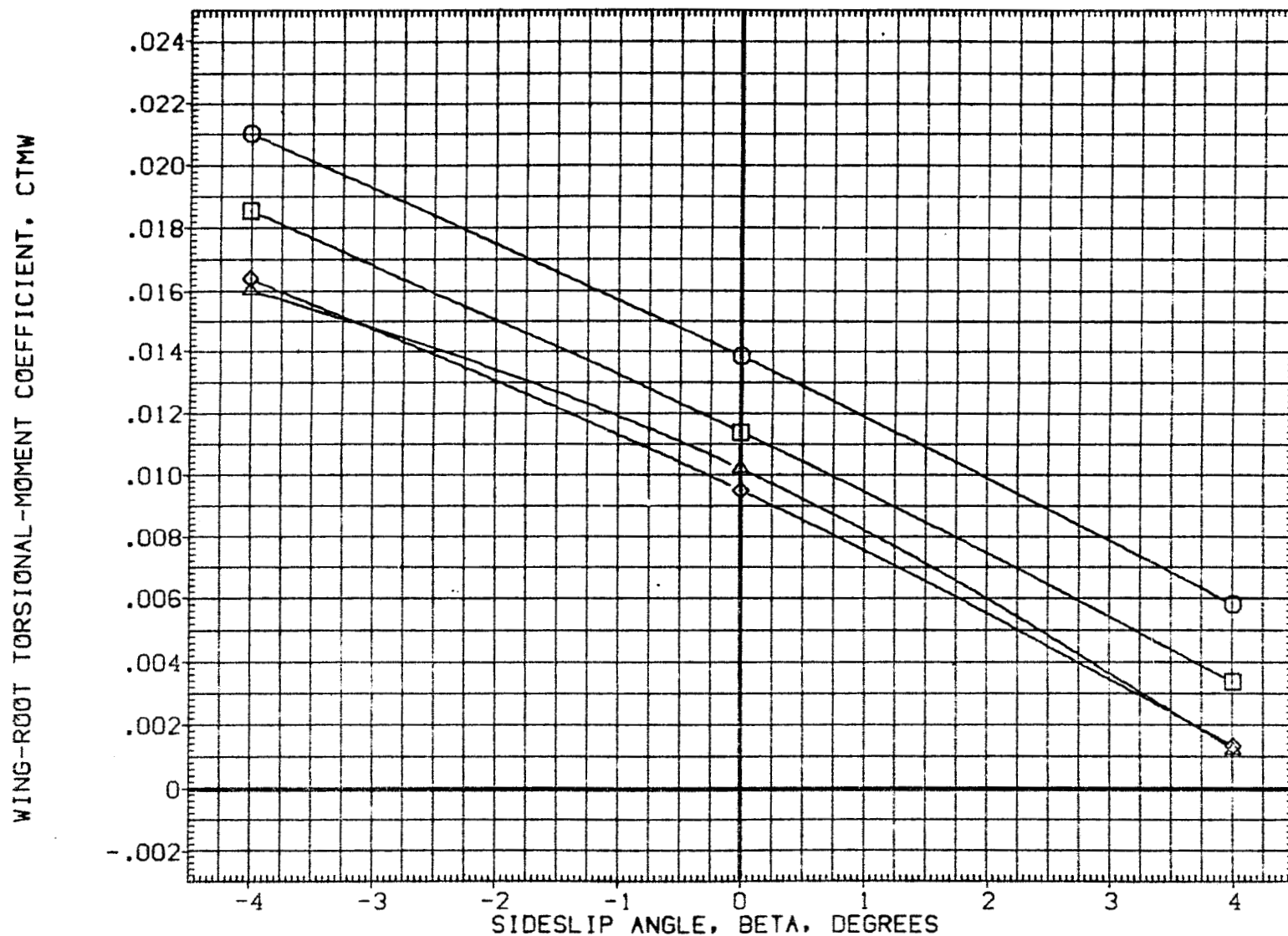


FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4YA7) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y97) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y81) △	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

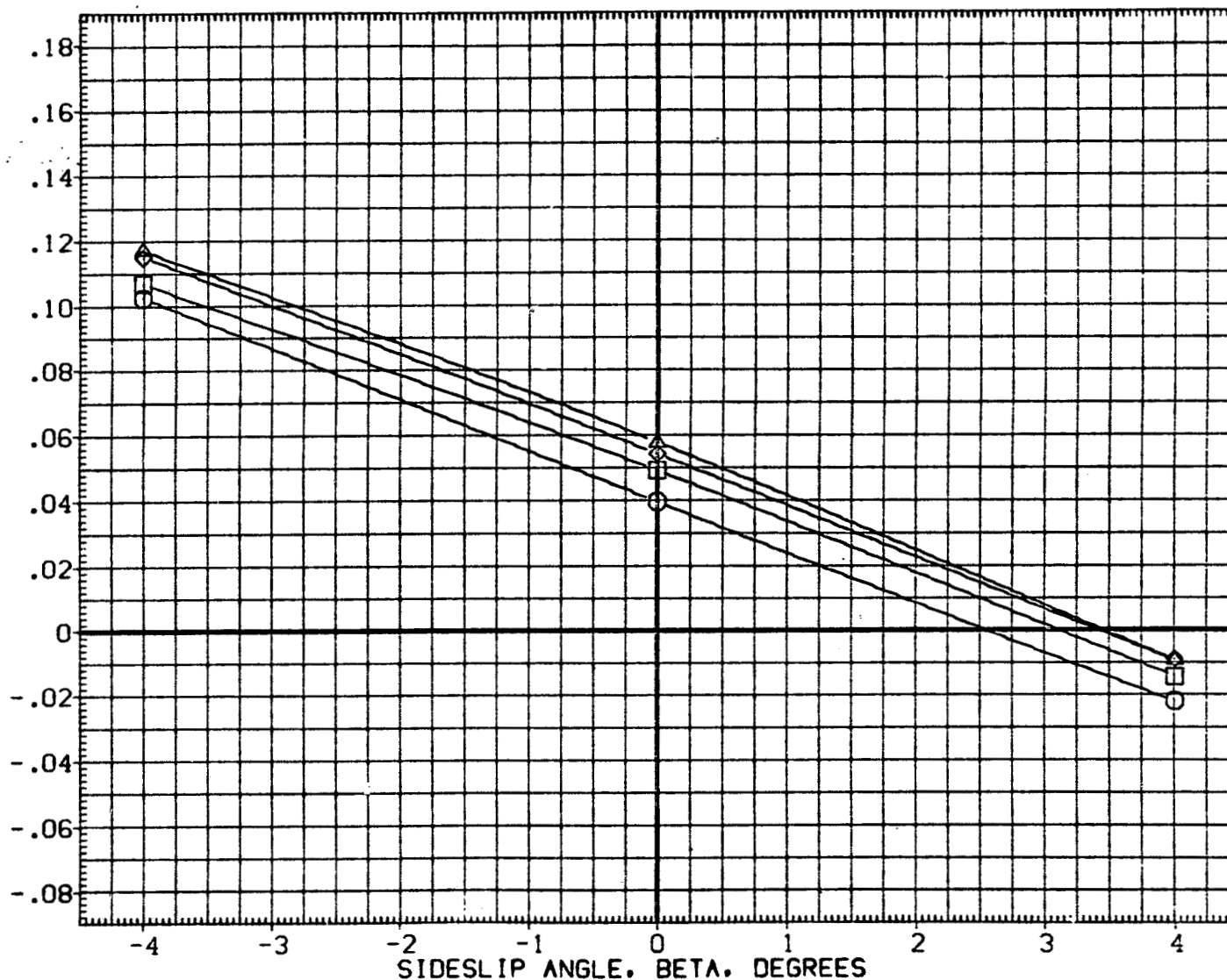


FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

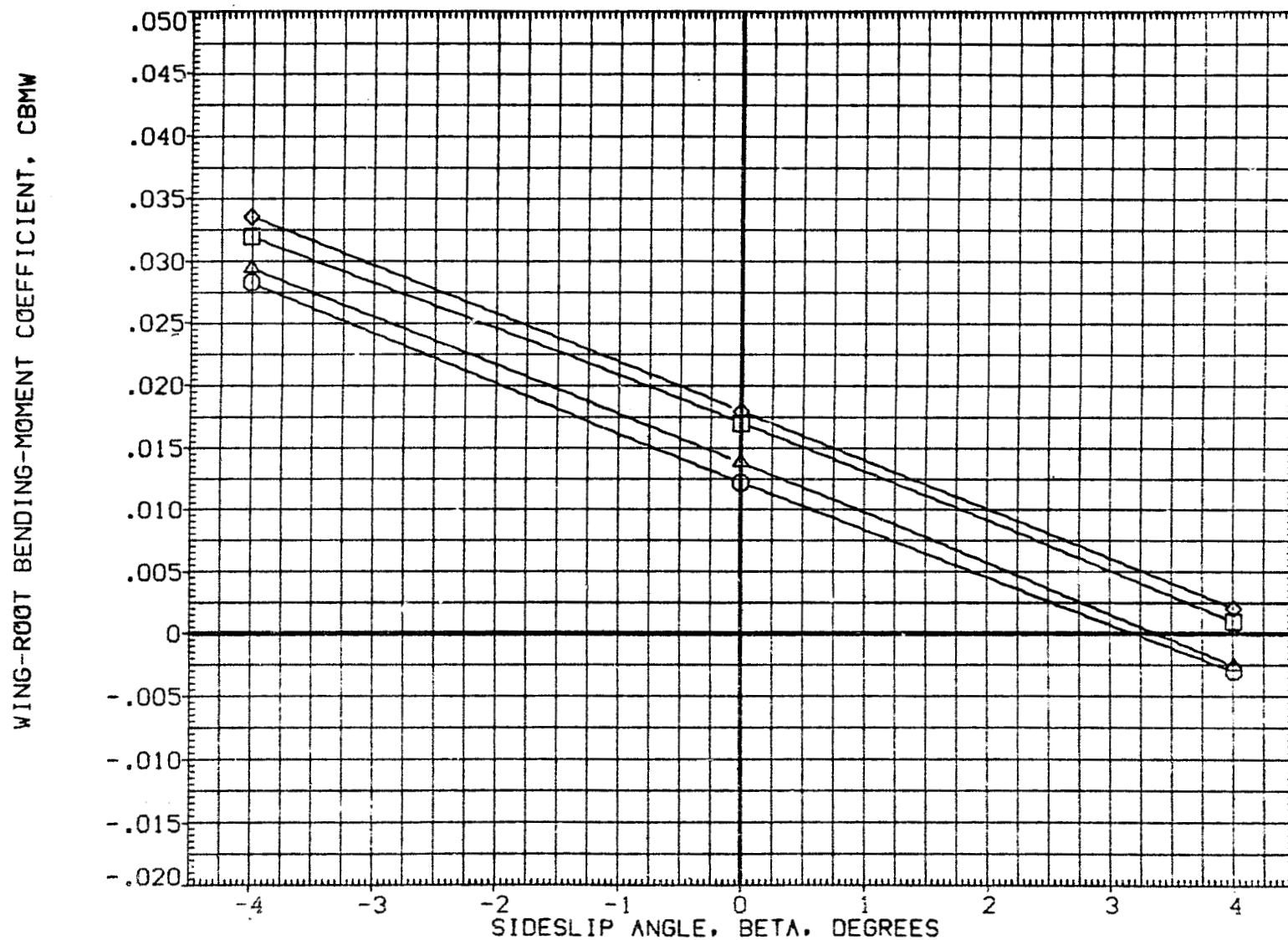


FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

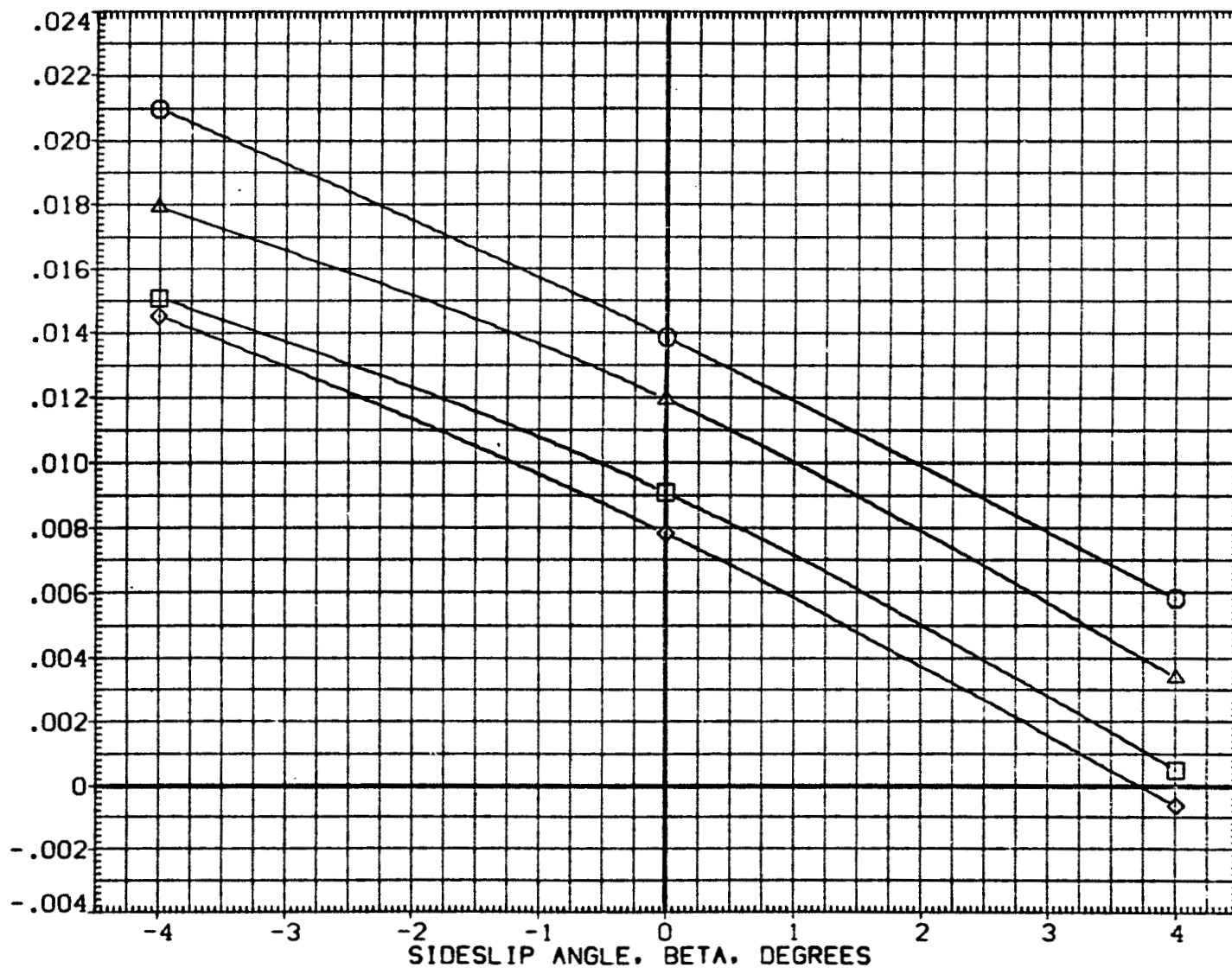


FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1

(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE422)	ARC 11-023 1A90 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SO.FT.
(RE4Y89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y60)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y71)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

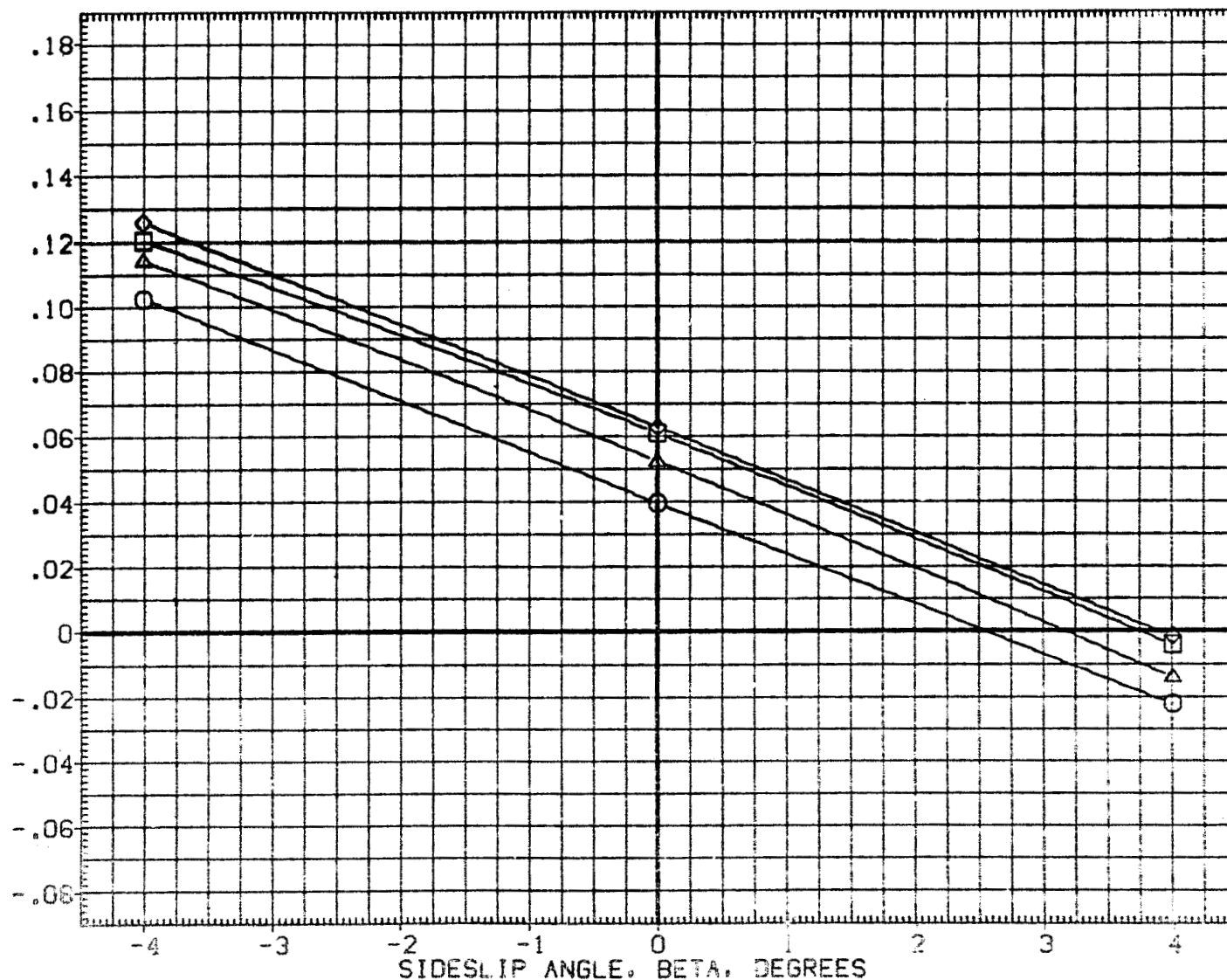


FIG. 36 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

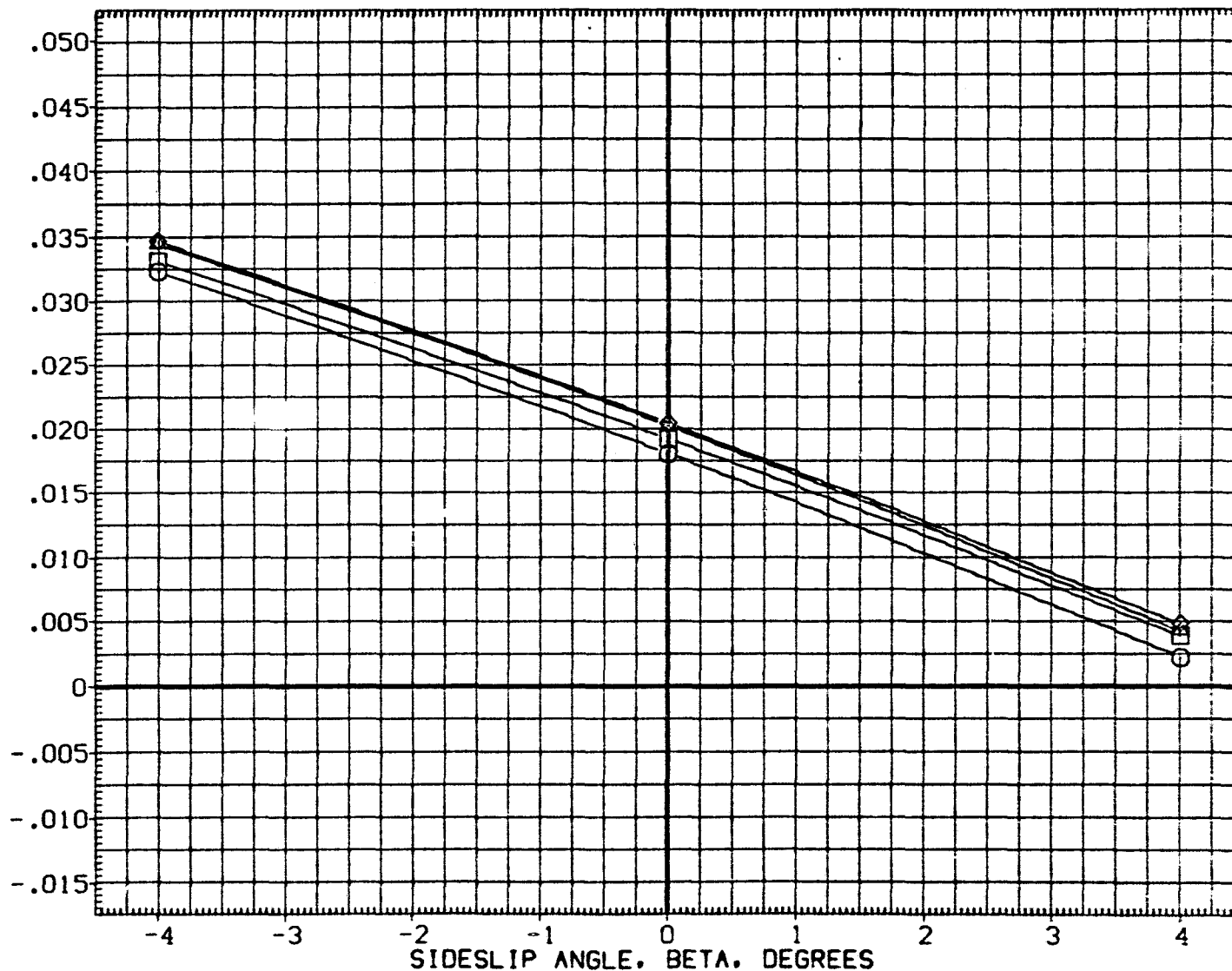


FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25
(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y23)	○	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4YA8)	□	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y98)	◇	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y82)	△	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

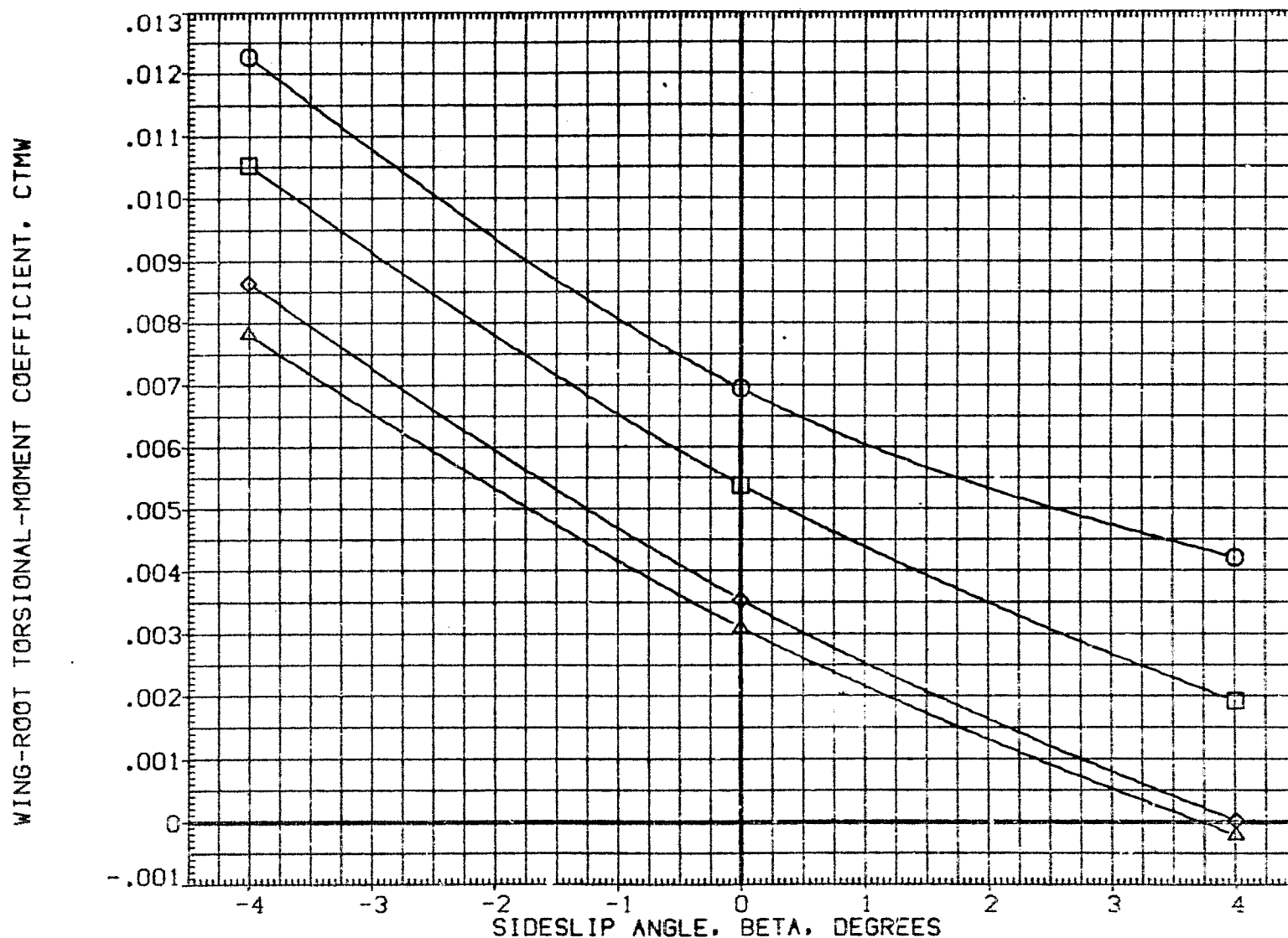


FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4YA8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

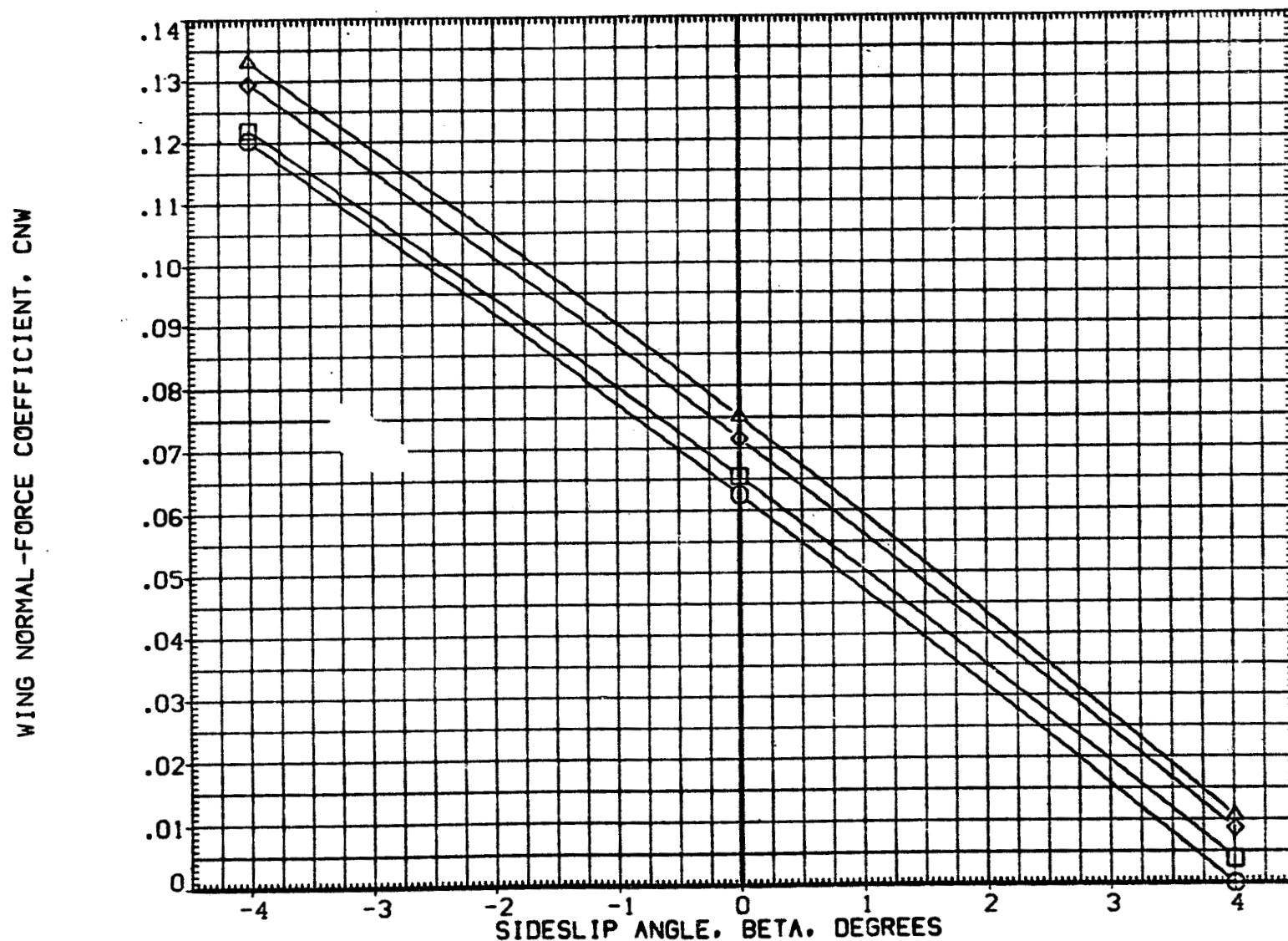


FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25

(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y61)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y72)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

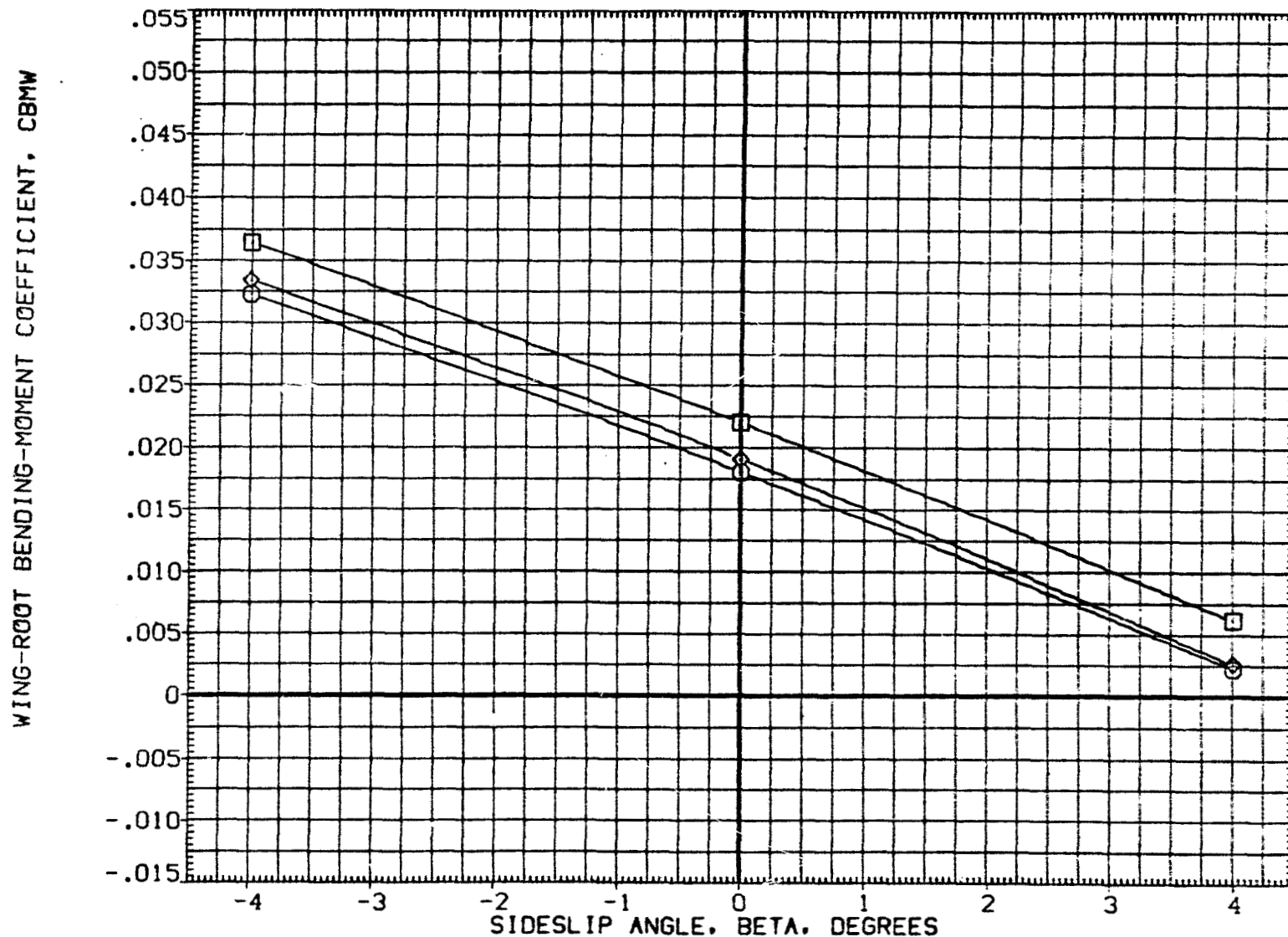


FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y23)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y61)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y72)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000	IN.
						XMRF	.0000	IN.
						YMRF	.0000	IN.
						ZMRF	.0000	IN.
						SCALE	.0200	

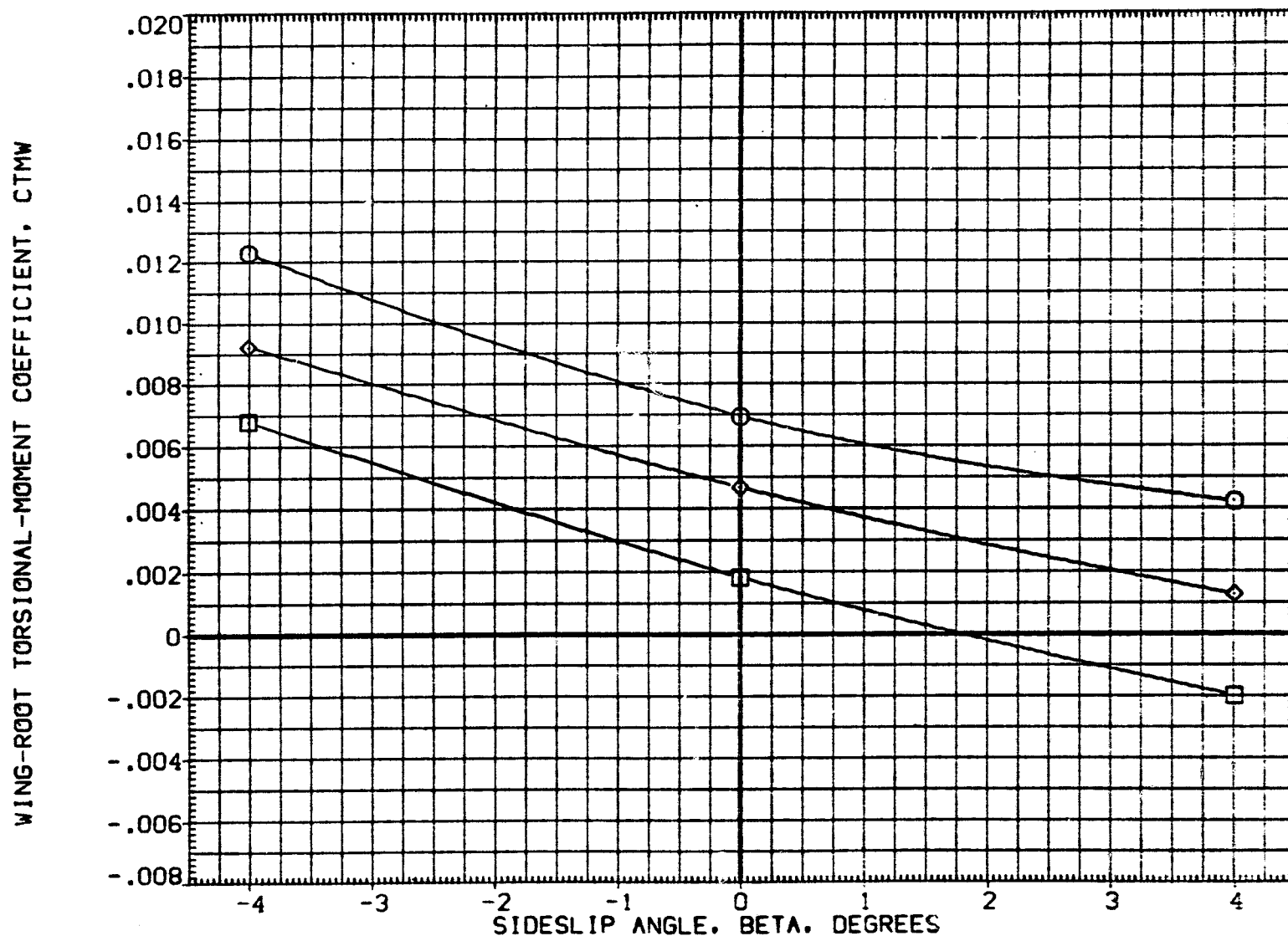


FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y23) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4Y61) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4Y72) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

ELV-1E	ELV-08	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
8.000	4.000	1.250	4.250	LREF 1290.3000 IN.
8.000	-4.000	1.250	4.250	BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

WING NORMAL-FORCE COEFFICIENT, CNW

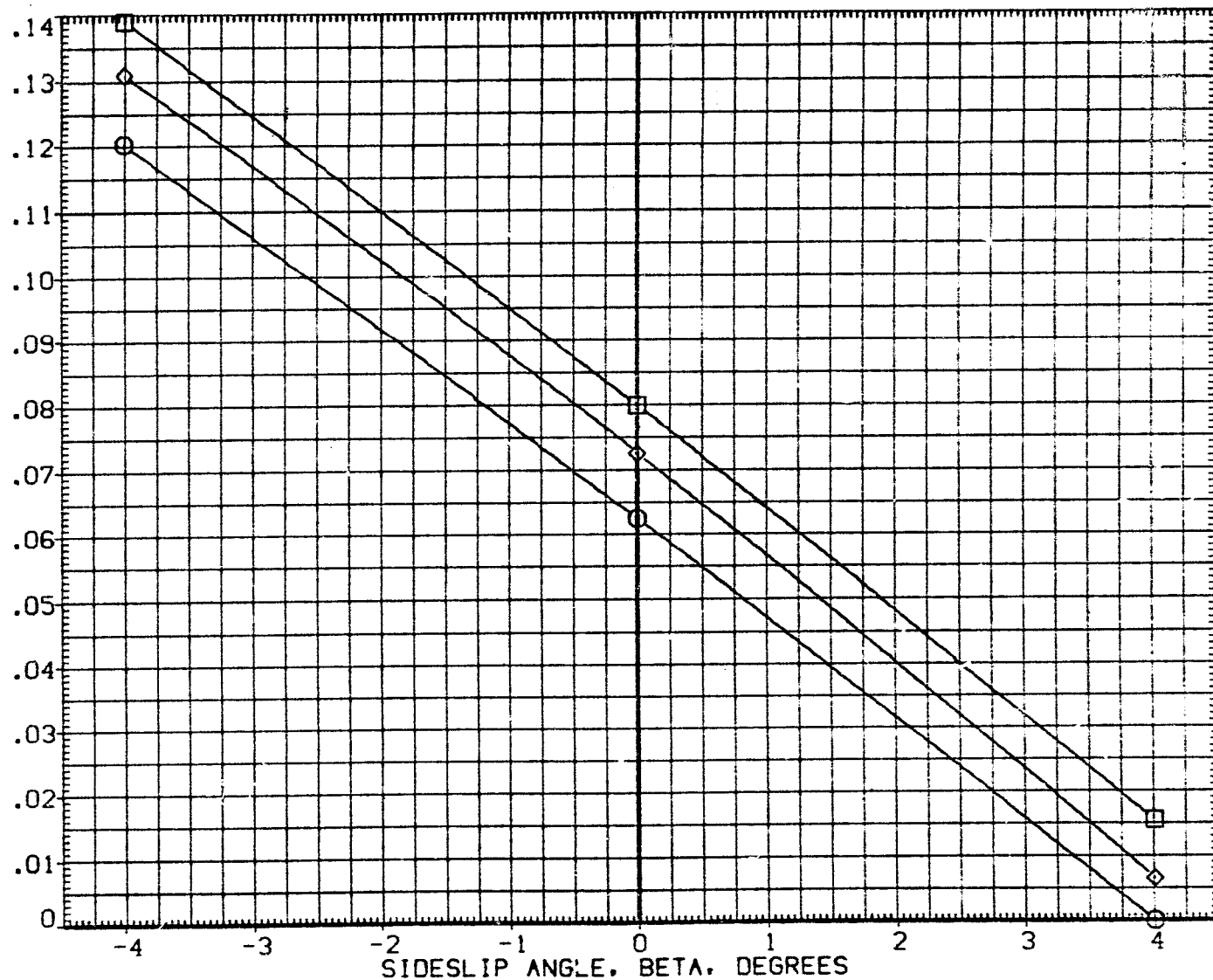


FIG. 37 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.25
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4YA9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF 1290.3000 IN.
(RE4Y99)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF 1290.3000 IN.
(RE4Y83)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

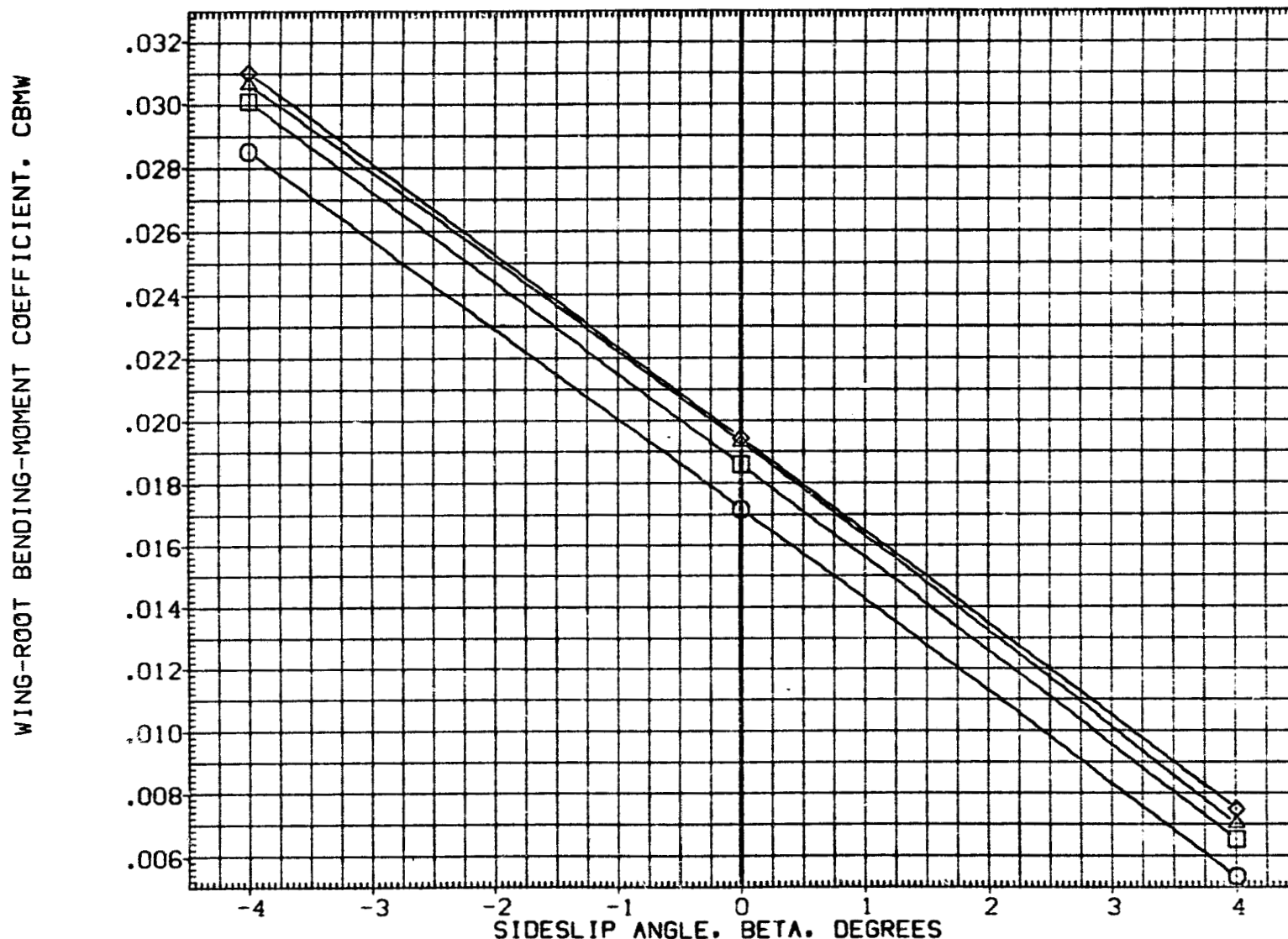


FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y24)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000	SC.FT.
(RE4YA9)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y99)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y83)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

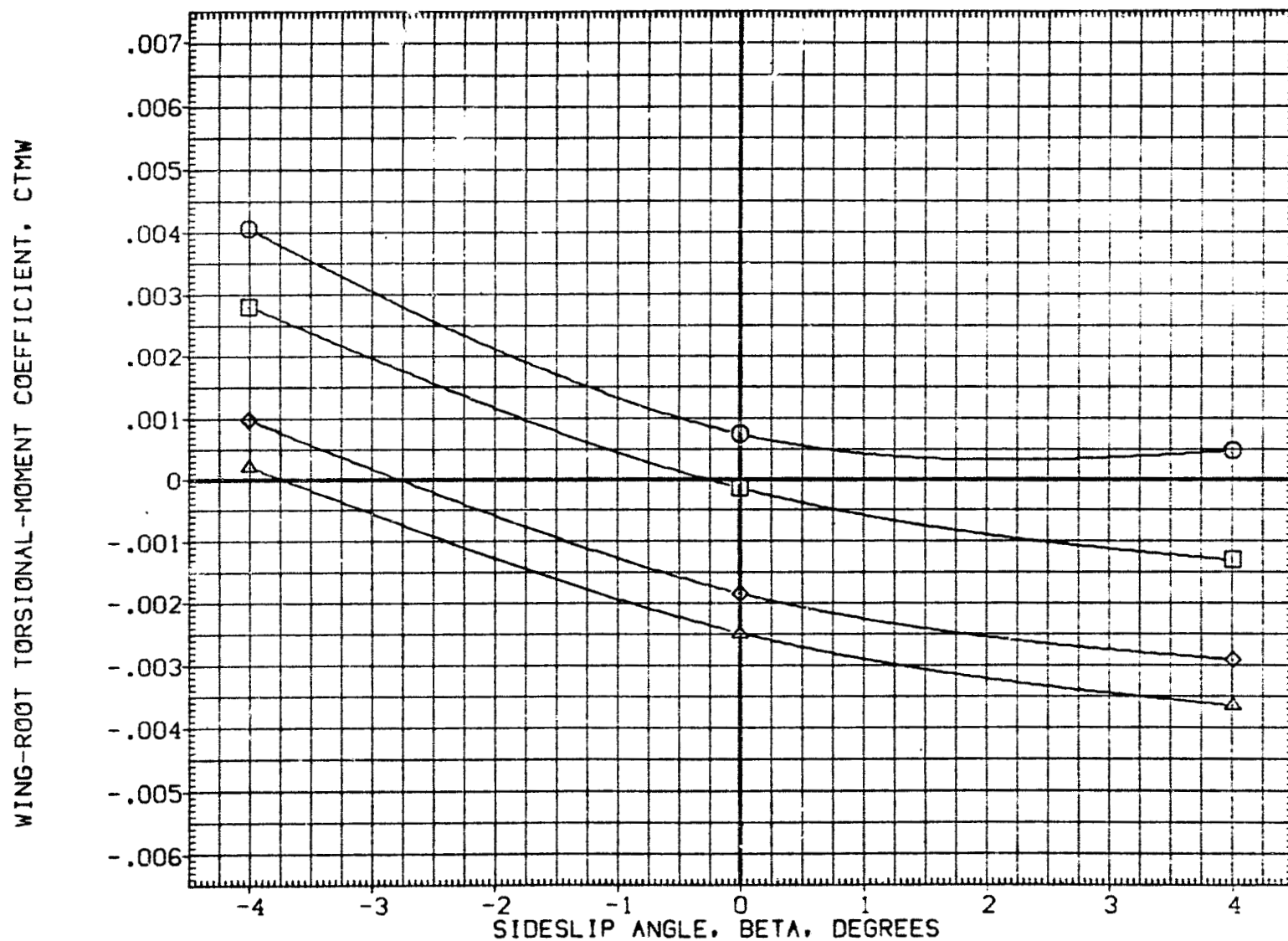


FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
(A) ALPHA = .00

PLUMES ON
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4YA9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y99)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y83)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

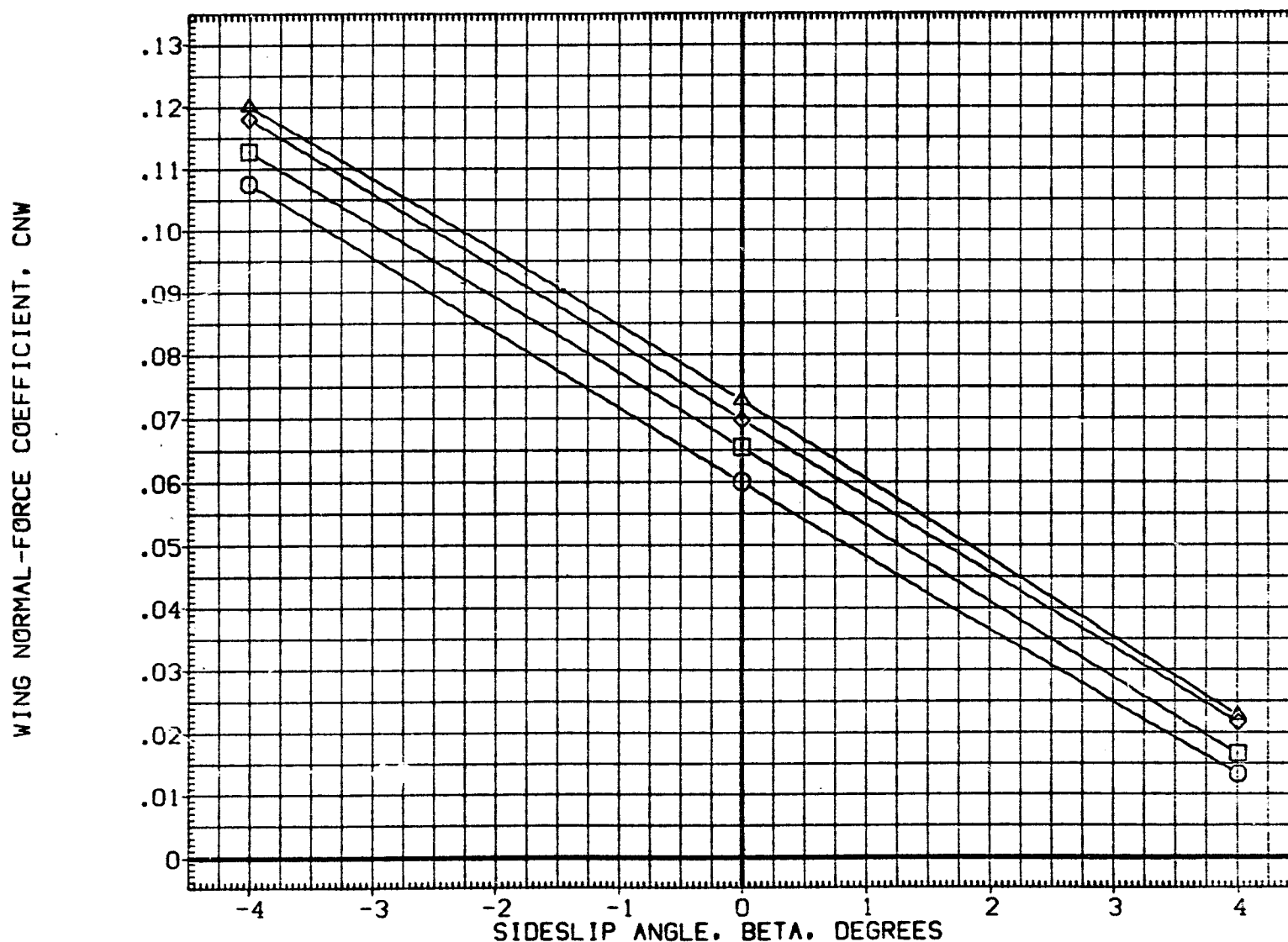


FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4

(A) ALPHA = .00

PLUMES ON

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y24) <input type="radio"/>	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)
(RE4Y62) <input type="checkbox"/>	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
8.000	4.000	1.400	4.250	LREF	1290.3000	IN.
				BREF	1290.3000	IN.
				XMRP	.0000	IN.
				YMRP	.0000	IN.
				ZMRP	.0000	IN.
				SCALE	.0200	

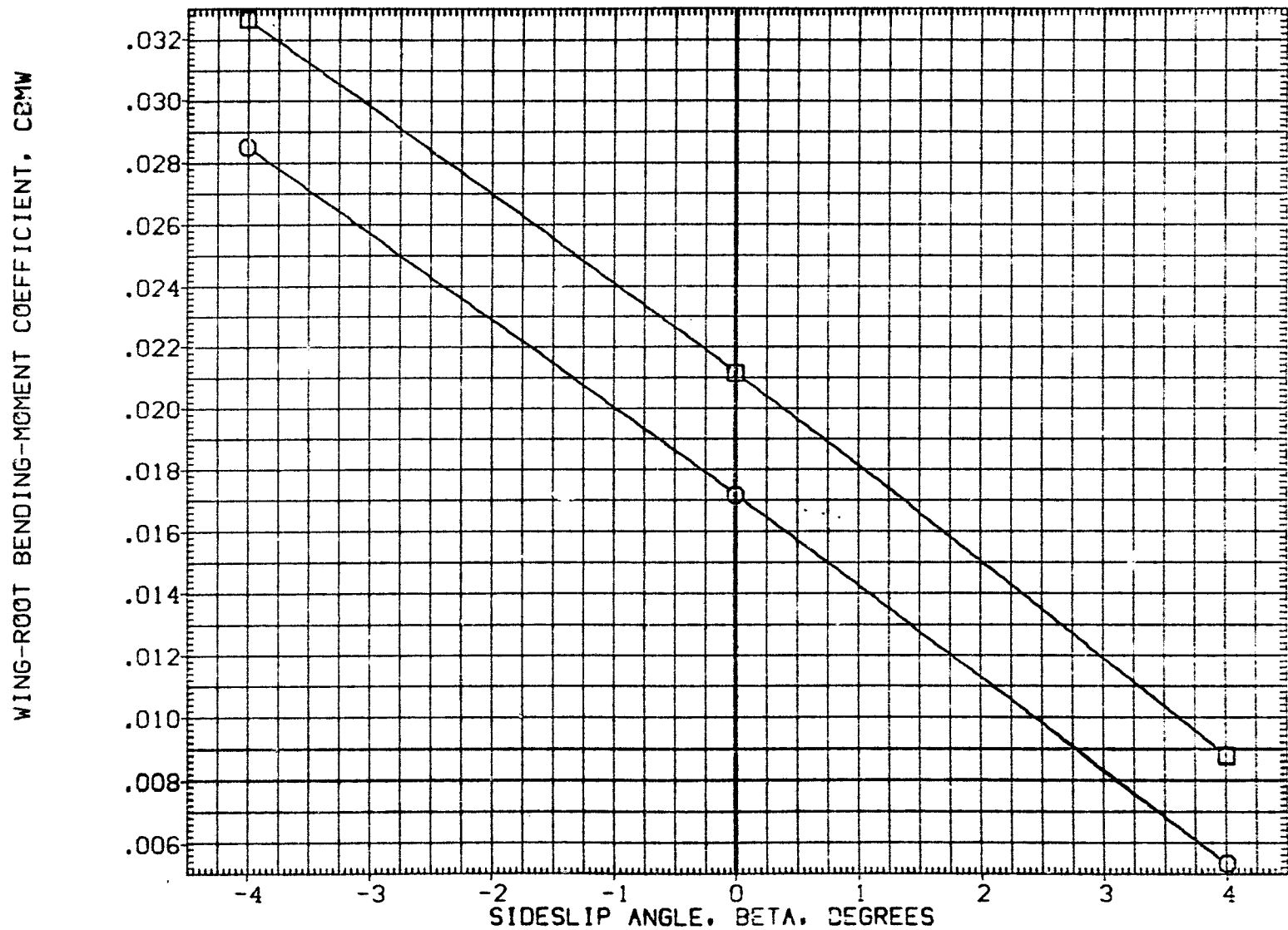


FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4Y62)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	1.400	4.250	LREF 1290.3000 IN.
						BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

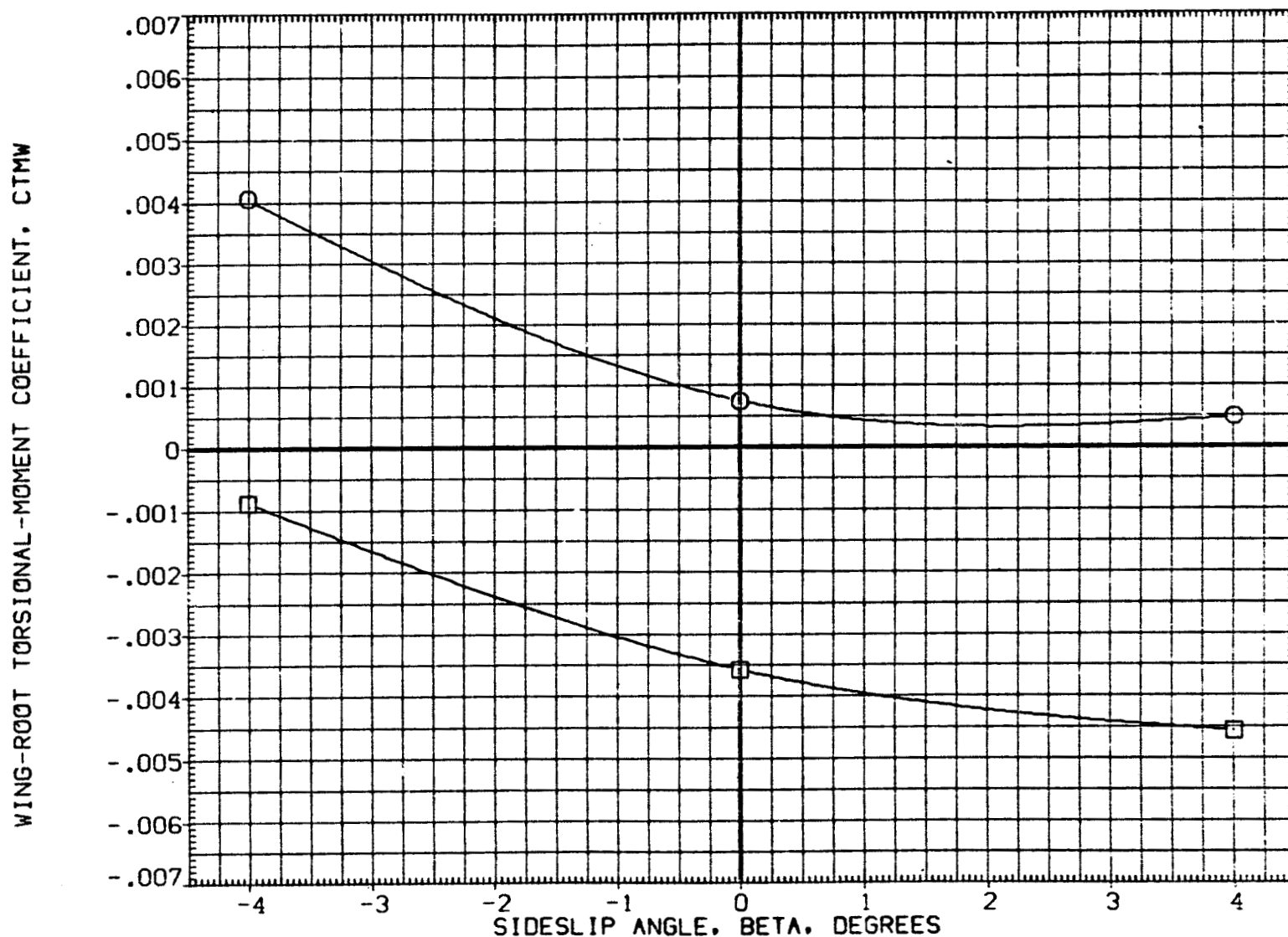


FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y24) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4Y62) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
8.000	4.000	1.400	4.250	LREF	1290.3000	IN.
				BREF	1290.3000	IN.
				XMRP	.0000	IN.
				YMRP	.0000	IN.
				ZMRP	.0000	IN.
				SCALE	.0200	

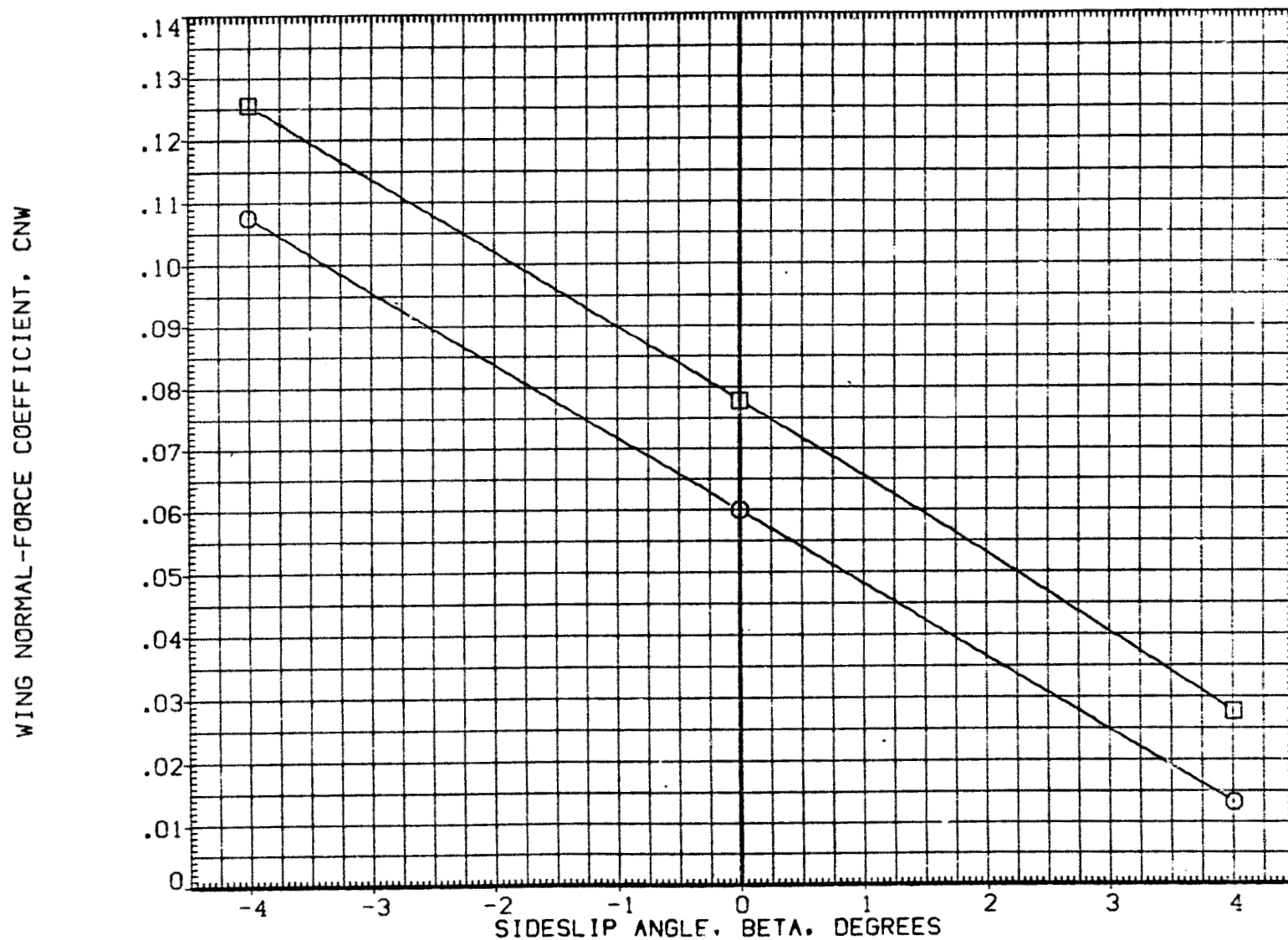


FIG. 38 EFFECT OF ELEVON SETTING ON WING LOADS IN YAW, MACH=1.4
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4YA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XM RP	.0000 IN.
						YM RP	.0000 IN.
						ZM RP	.0000 IN.
						SCALE	.0200

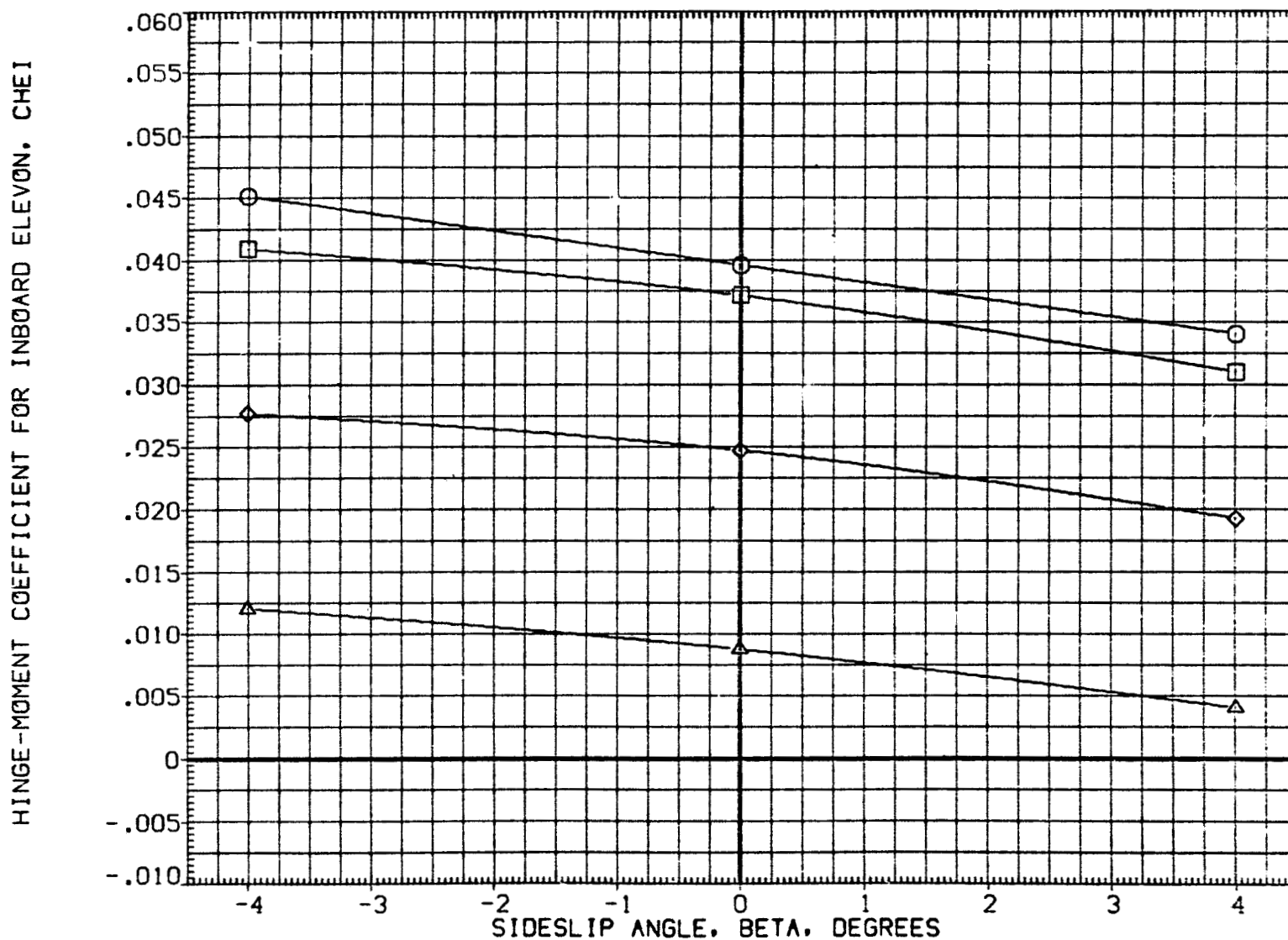


FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4YA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

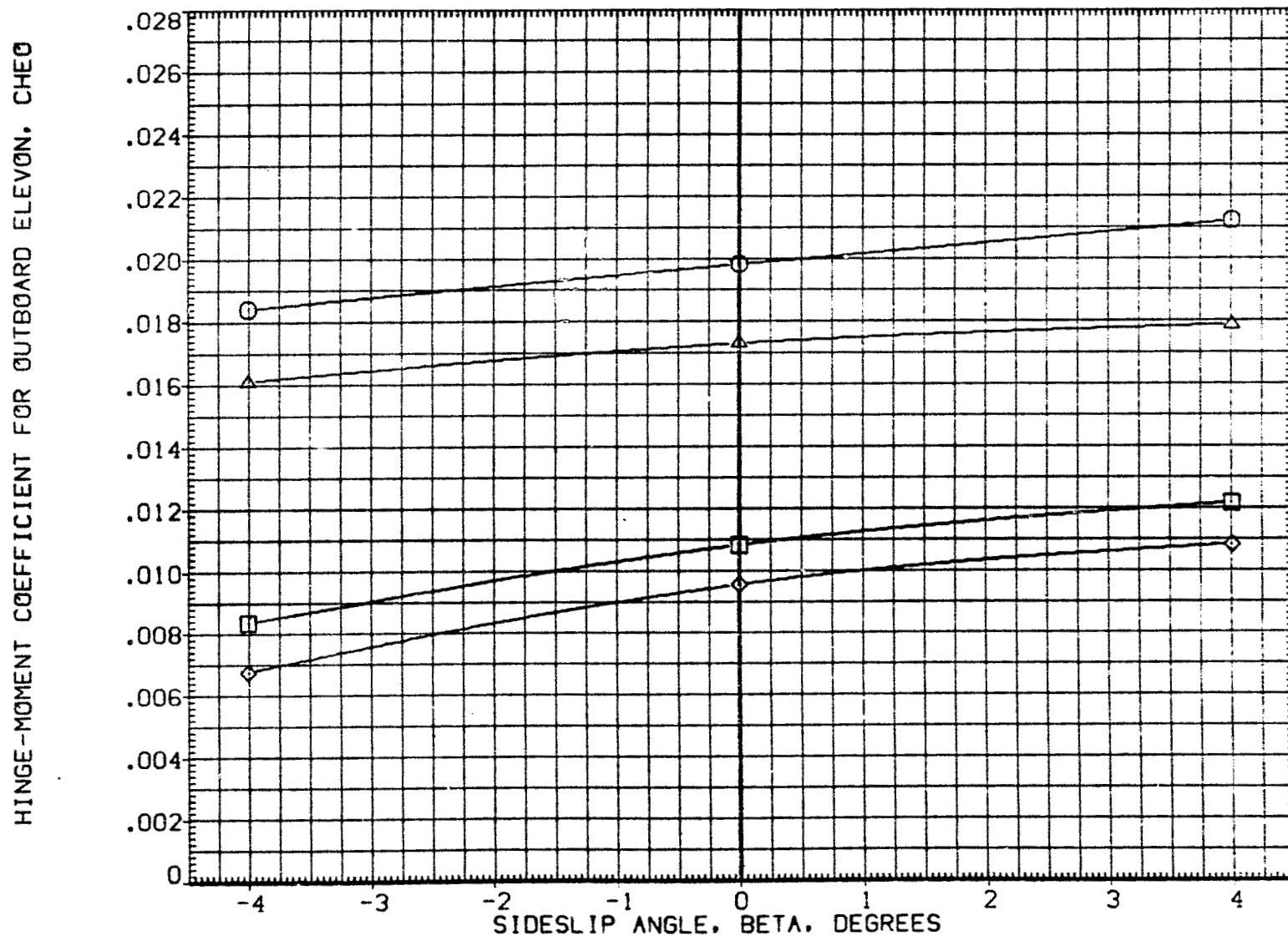


FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-10	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

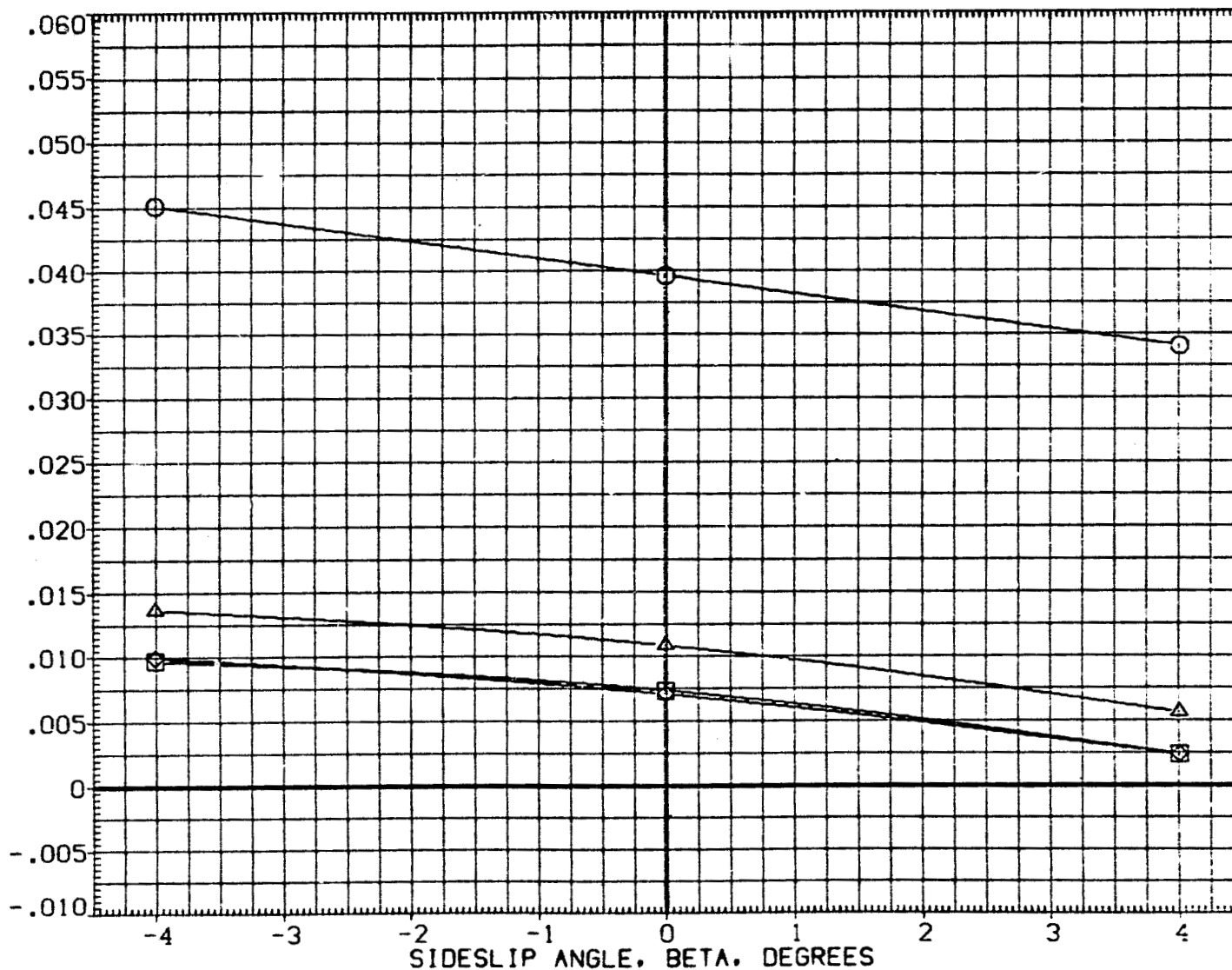


FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

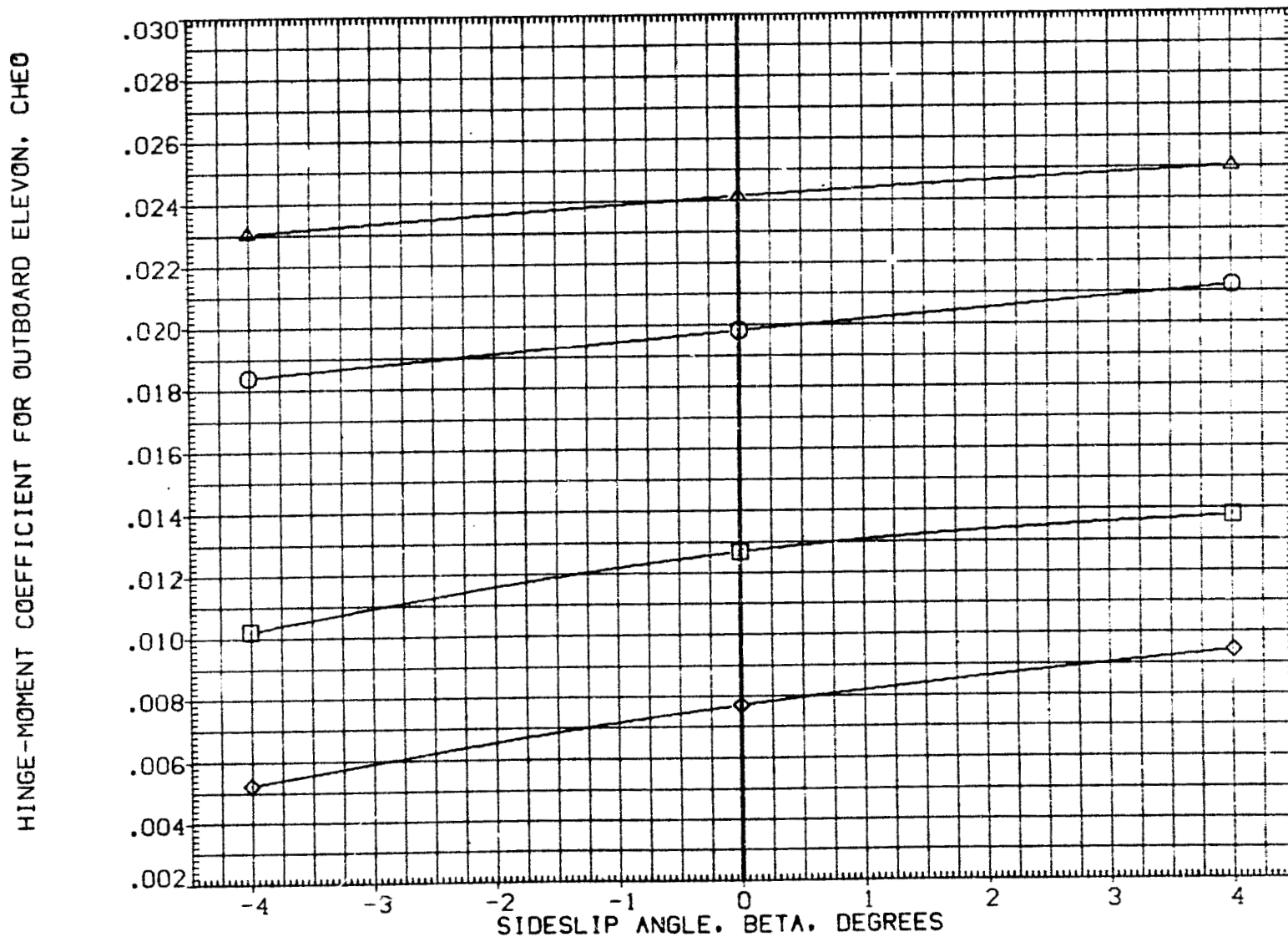


FIG. 39 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.6 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4YA6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y96)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

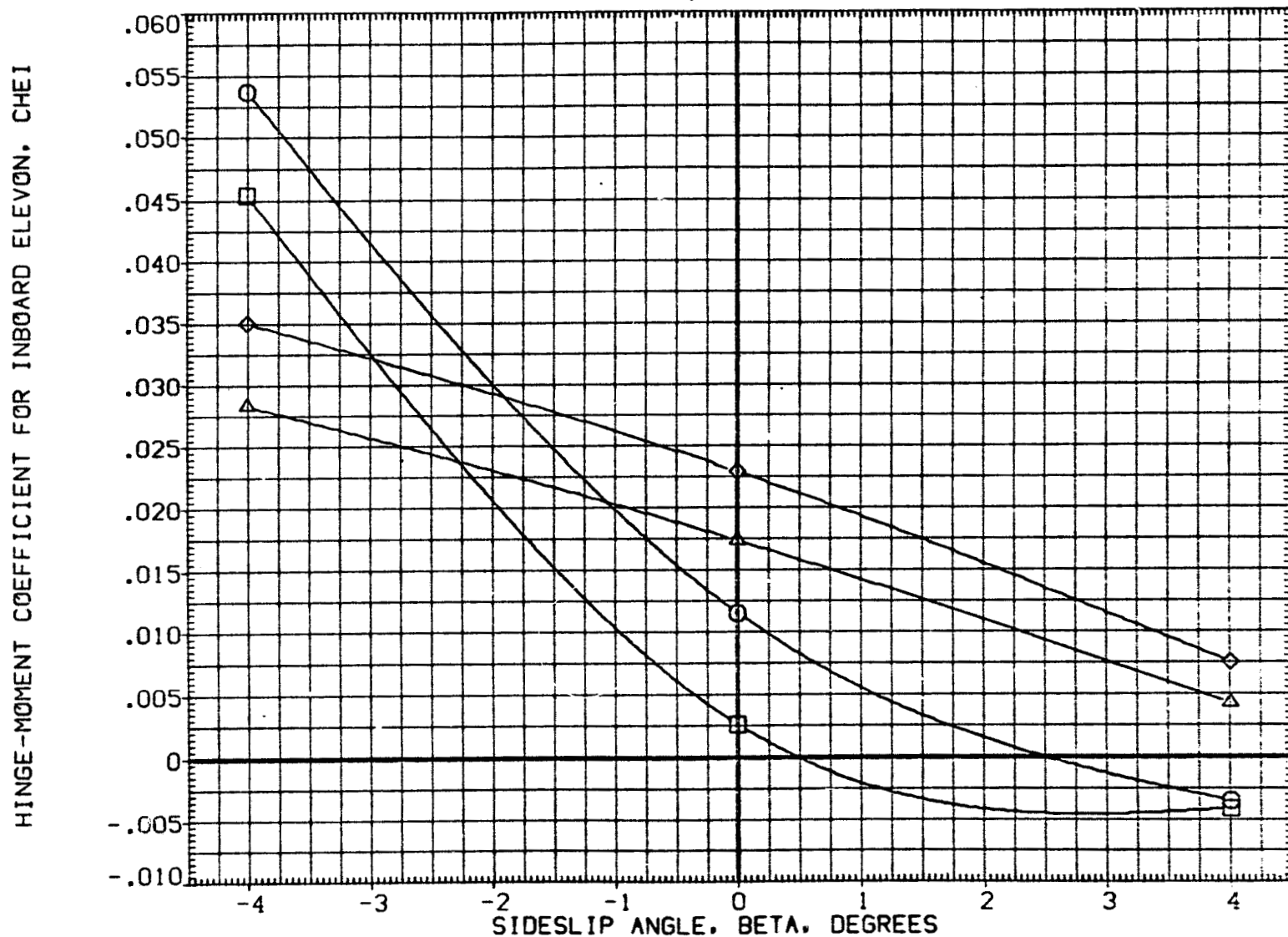


FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 [A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4YA6)	ARC 11-023 [A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y96)	ARC 11-023 [A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y80)	ARC 11-023 [A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

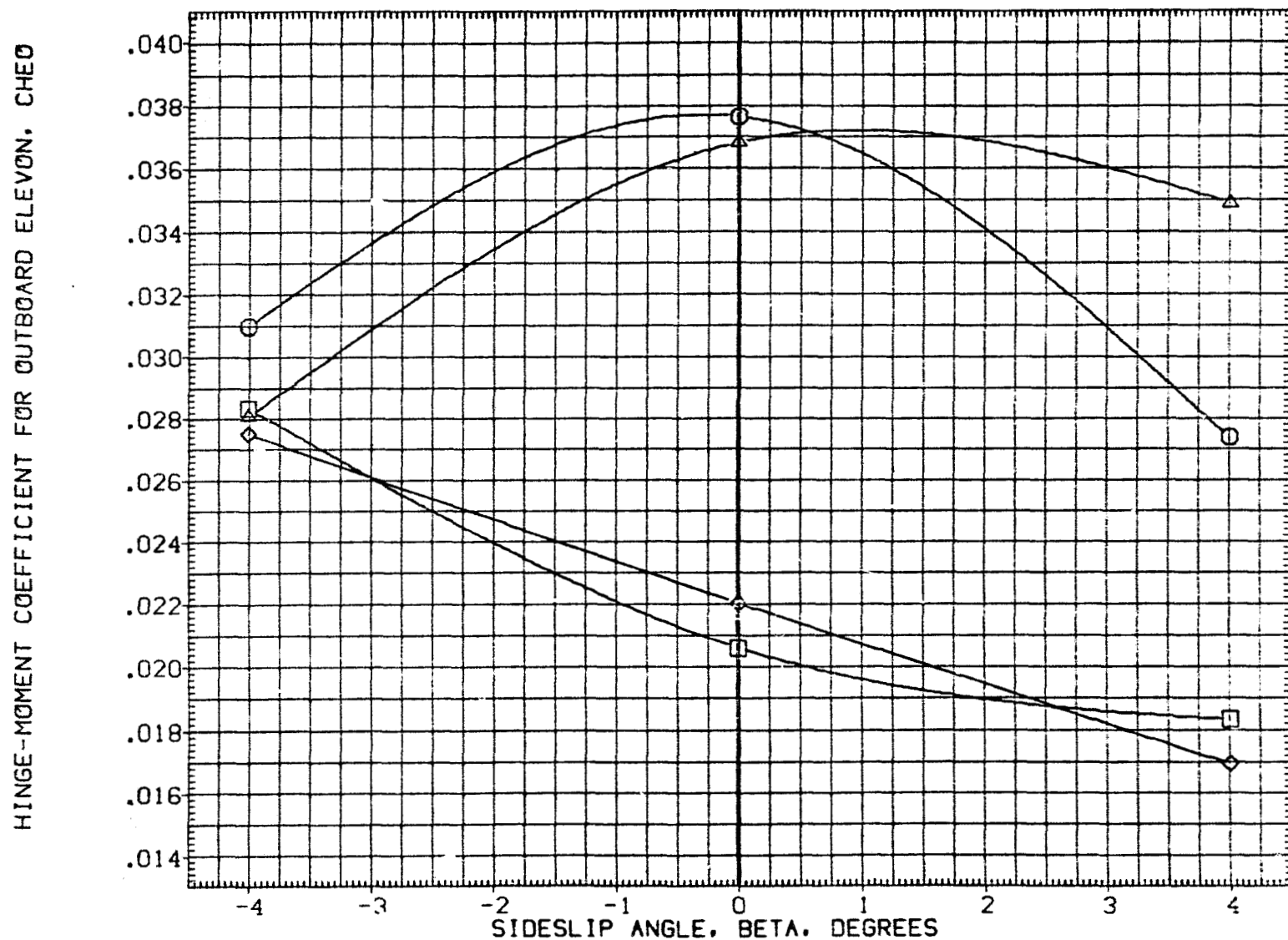


FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y59)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y70)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

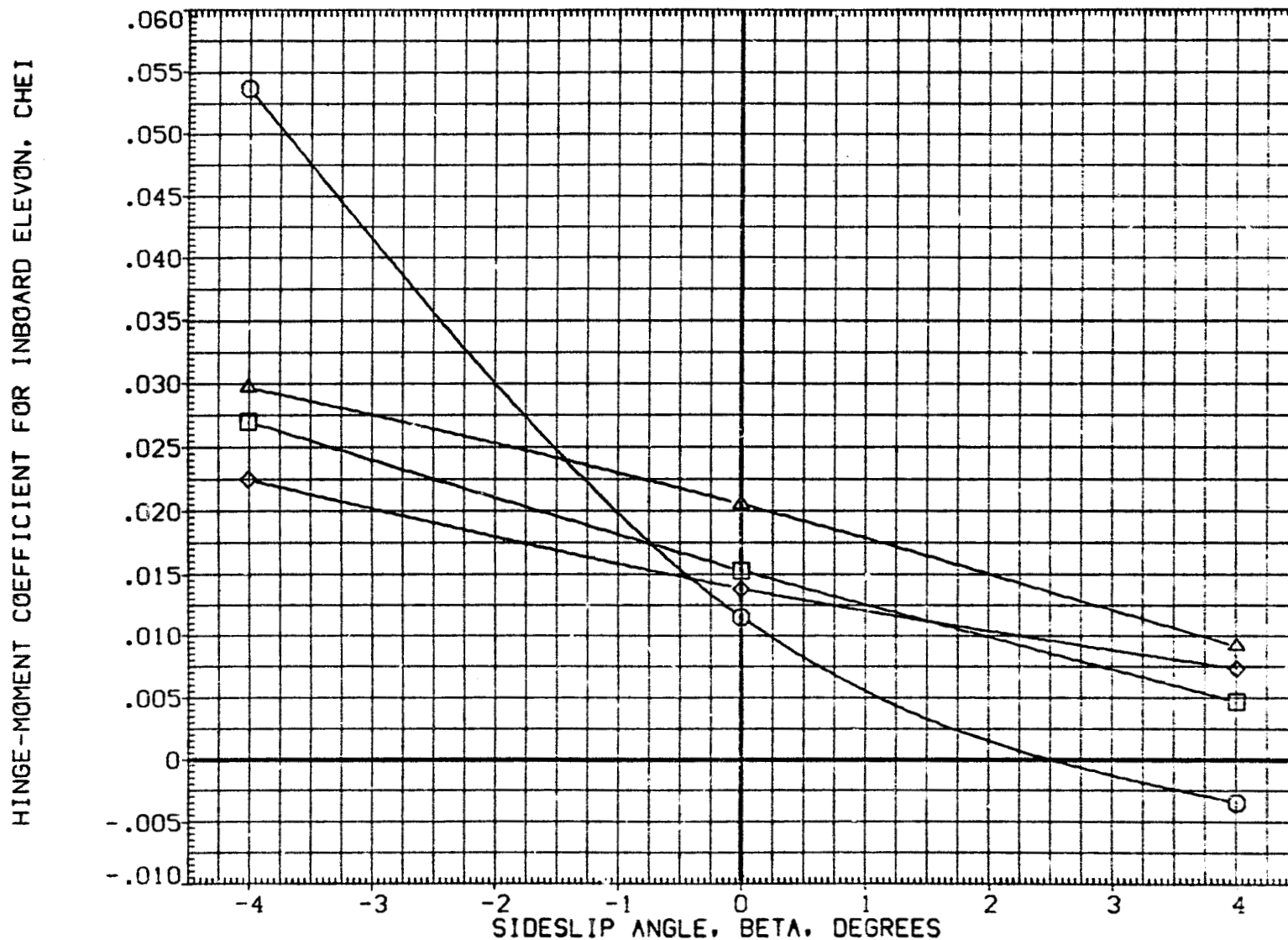


FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON
 (A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	○	ARC 11-023 1AB0 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y88)	□	ARC 11-023 1AB0 0TS (SRB NOM) (SSME NOM)	8.000	2.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y59)	△	ARC 11-023 1AB0 0TS (SRB NOM) (SSME NOM)	8.000	4.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y70)	◇	ARC 11-023 1AB0 0TS (SRB NOM) (SSME NOM)	8.000	-4.900	.900	4.250	XMRP	.0000 IN.
							YMRP	.0000 IN.
							ZMRP	.0000 IN.
							SCALE	.0200

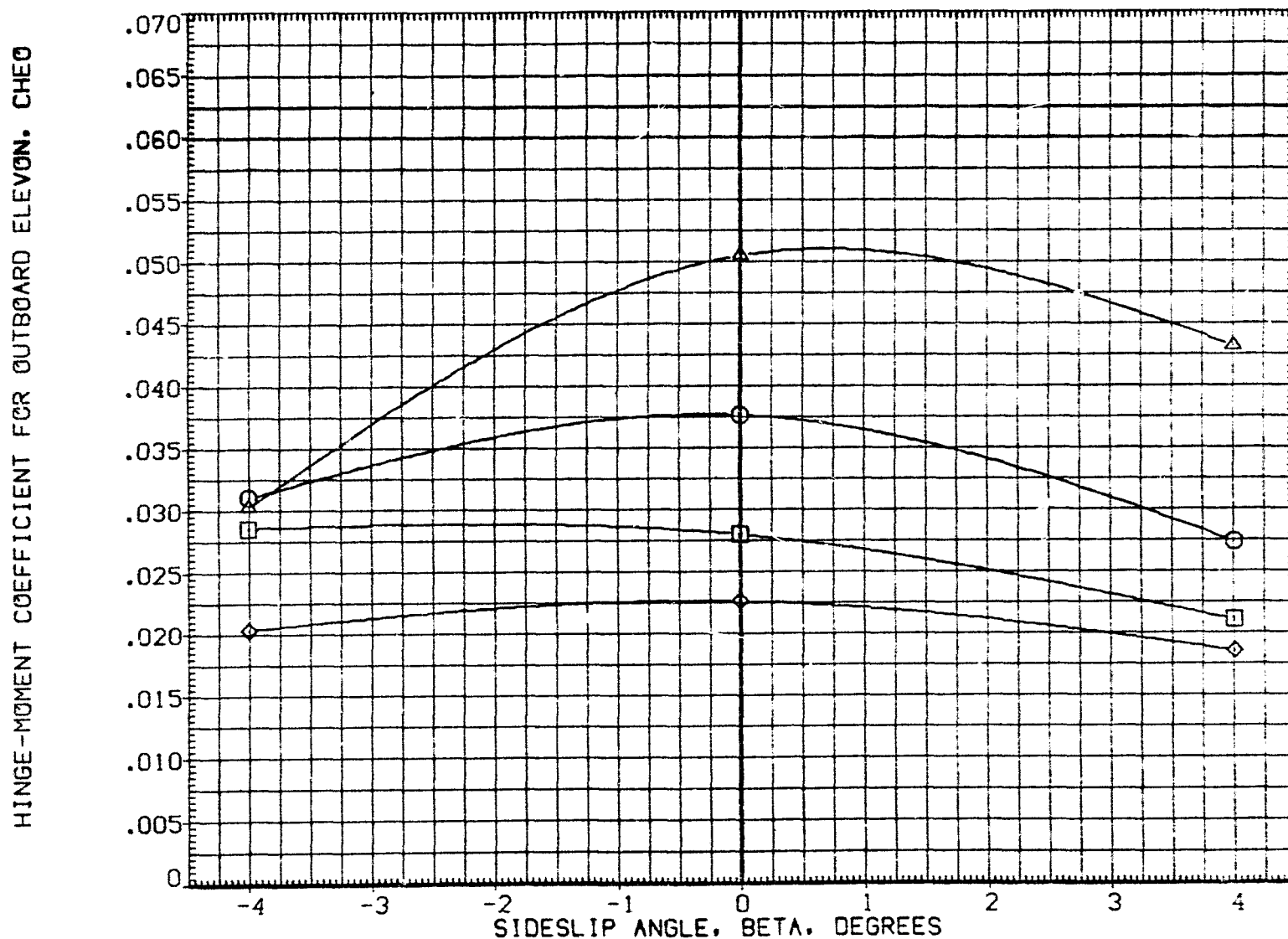


FIG. 40 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=0.9 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4YA7)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	4.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y97)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y81)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

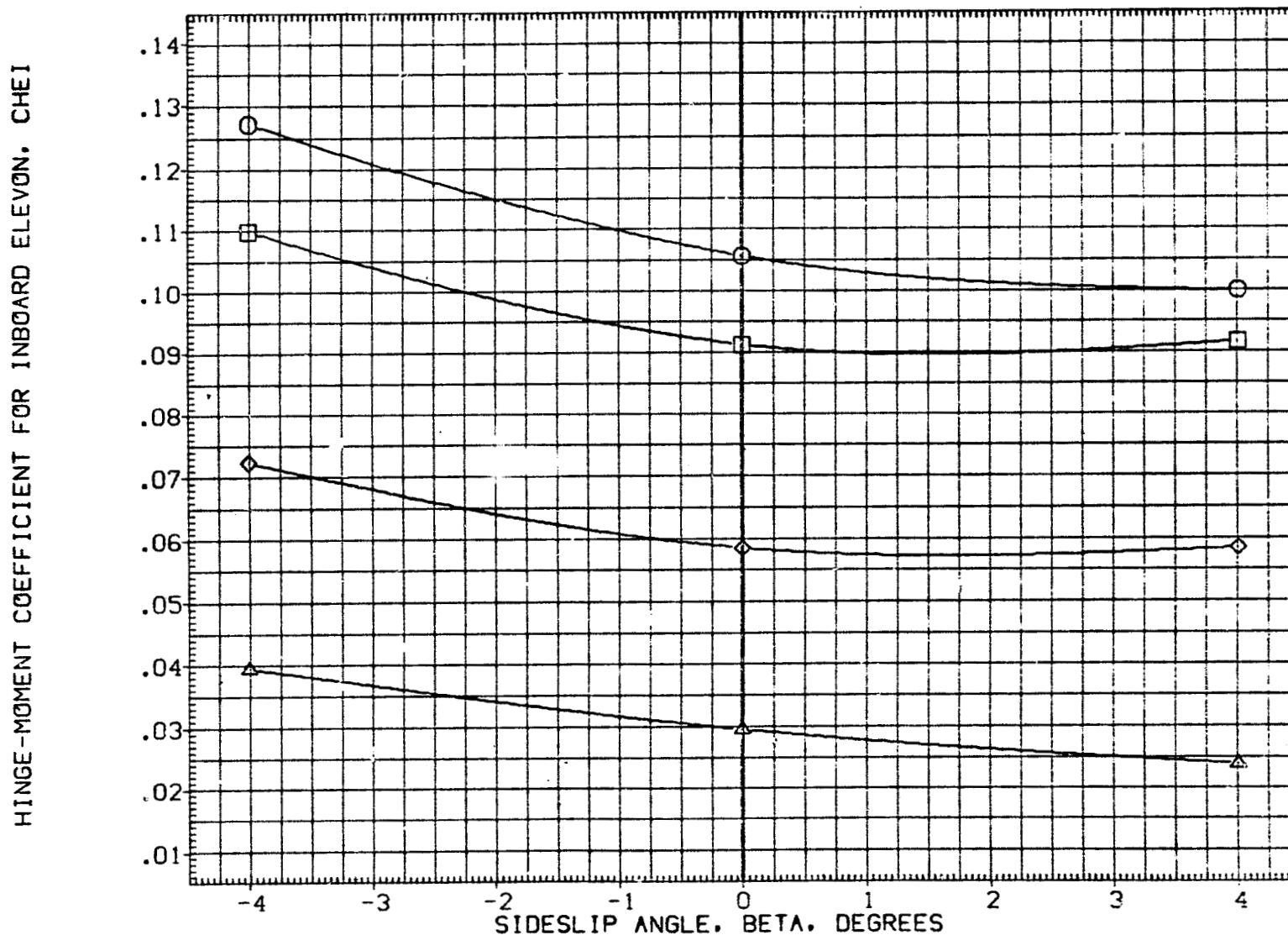


FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	SCALE	REFERENCE INFORMATION	
(RE4Y22)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	.250	SREF	2690.0000 SQ.FT.
(RE4YA7)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	1.100	.250	LREF	1290.3000 IN.
(RE4Y97)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y81)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	1.100	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

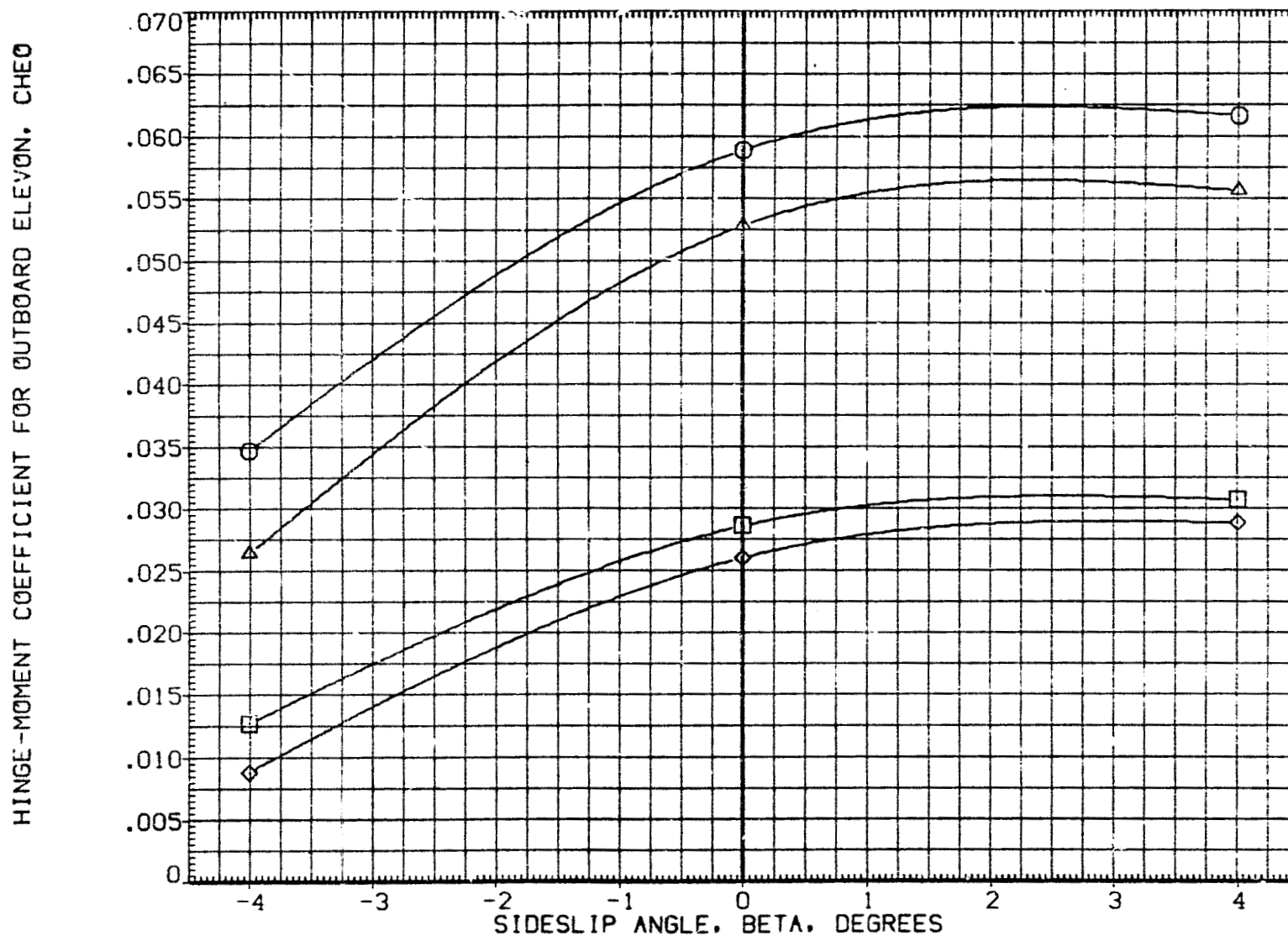


FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y89)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y60)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y71)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

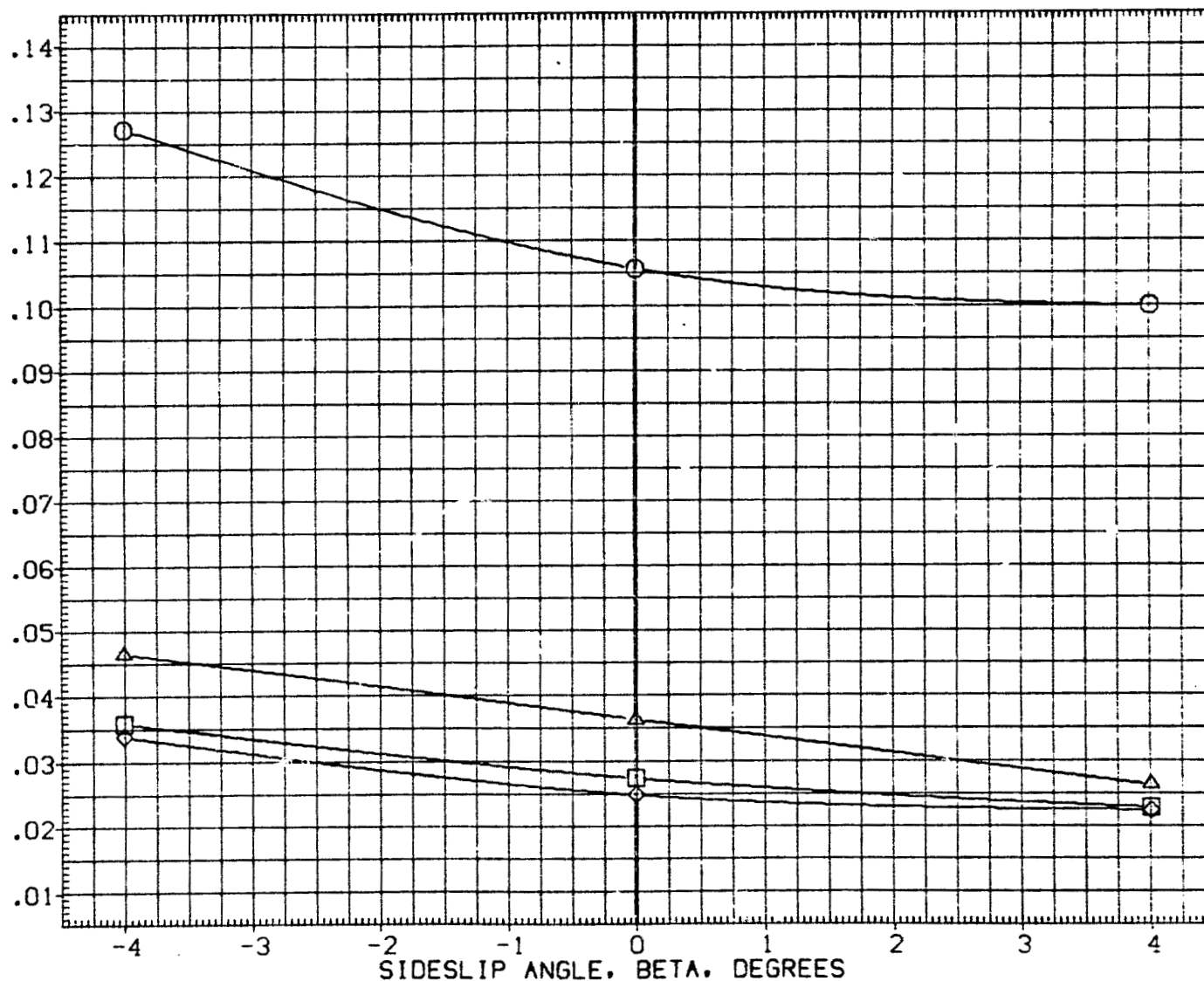


FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME CN
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y89)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	9.000	2.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y60)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y71)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	1.100	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

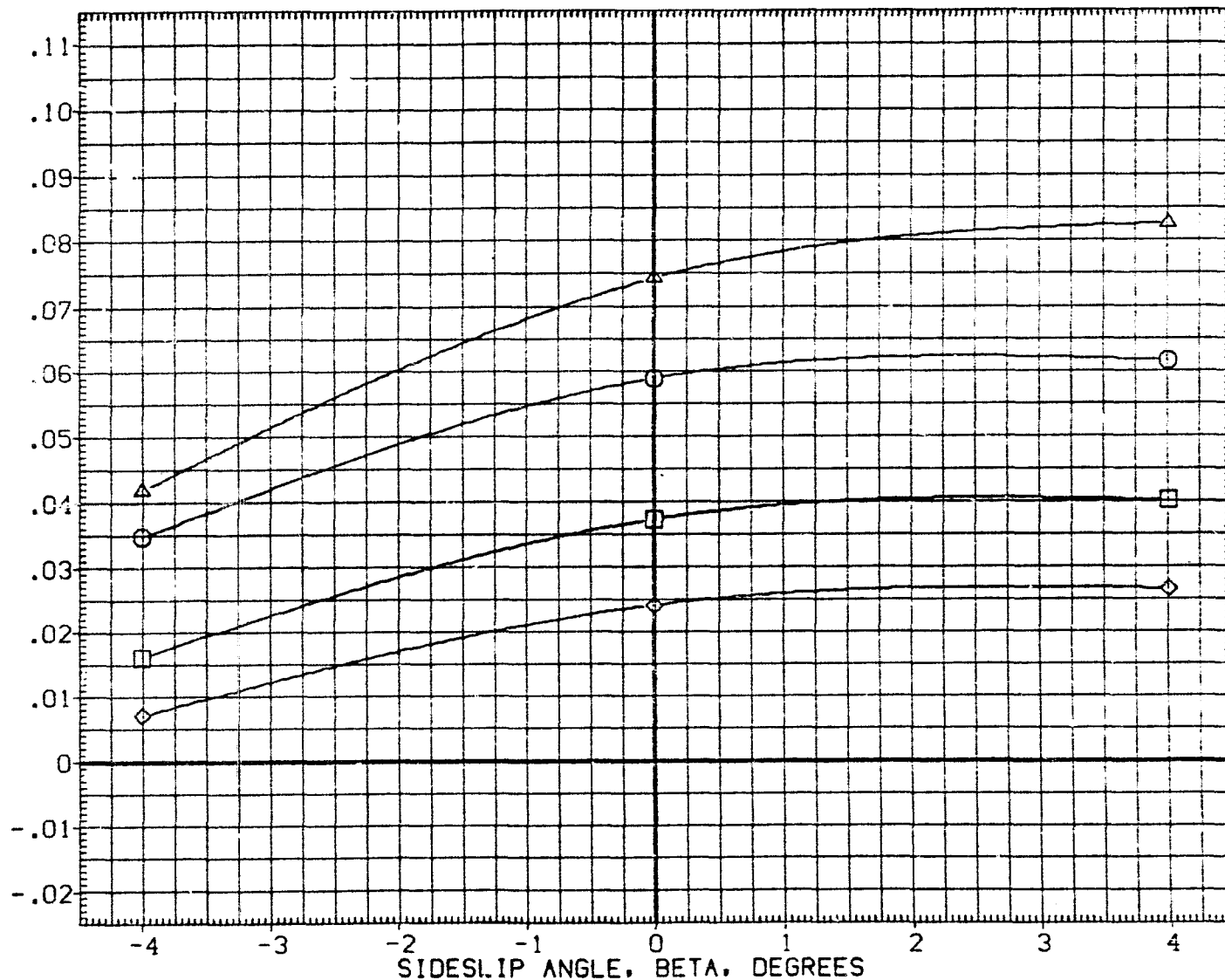


FIG. 41 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.1 PLUME ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y23)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4YA8)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y98)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y82)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMFP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

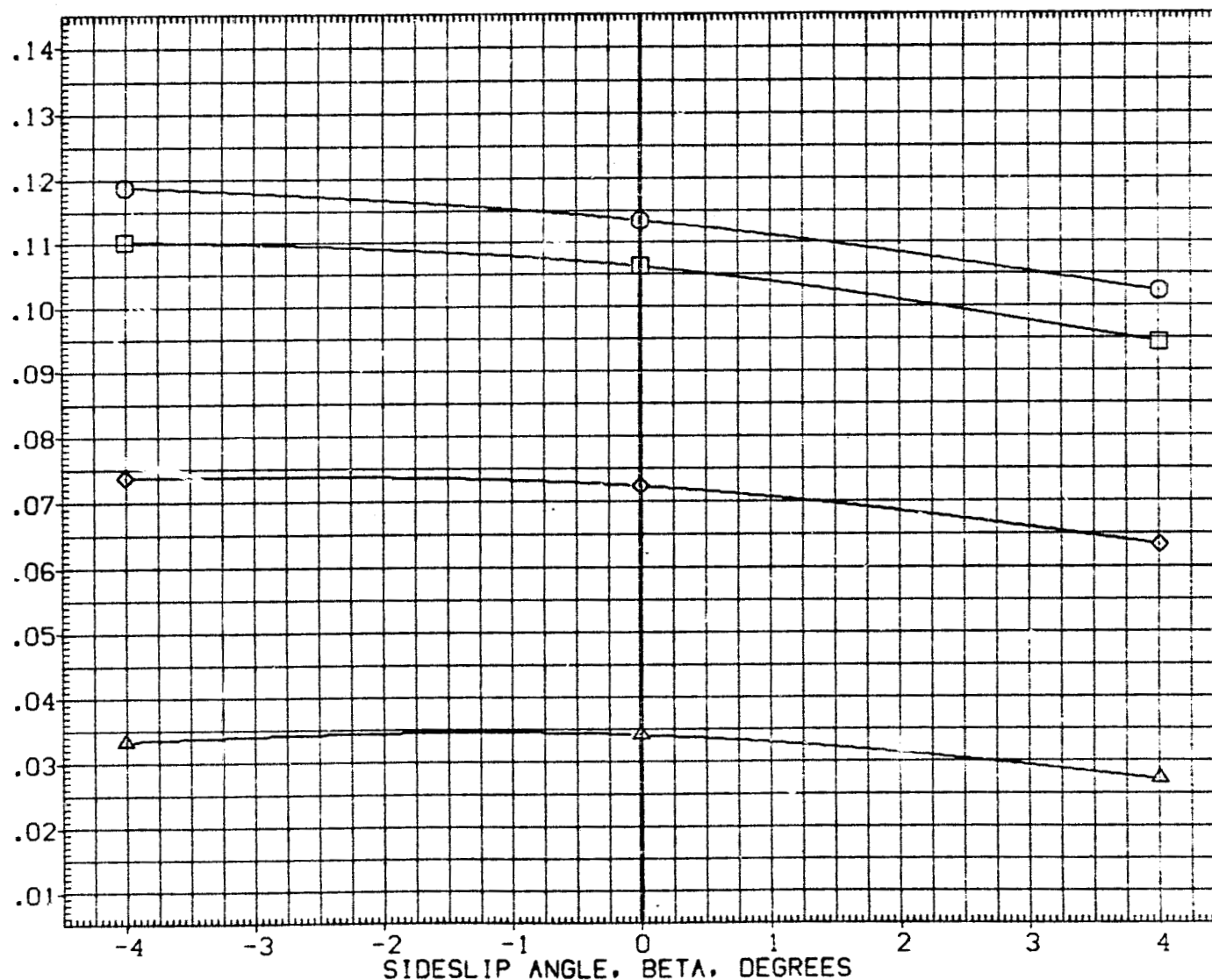


FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.25 PLUME ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4YA8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y98)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y82)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.250	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

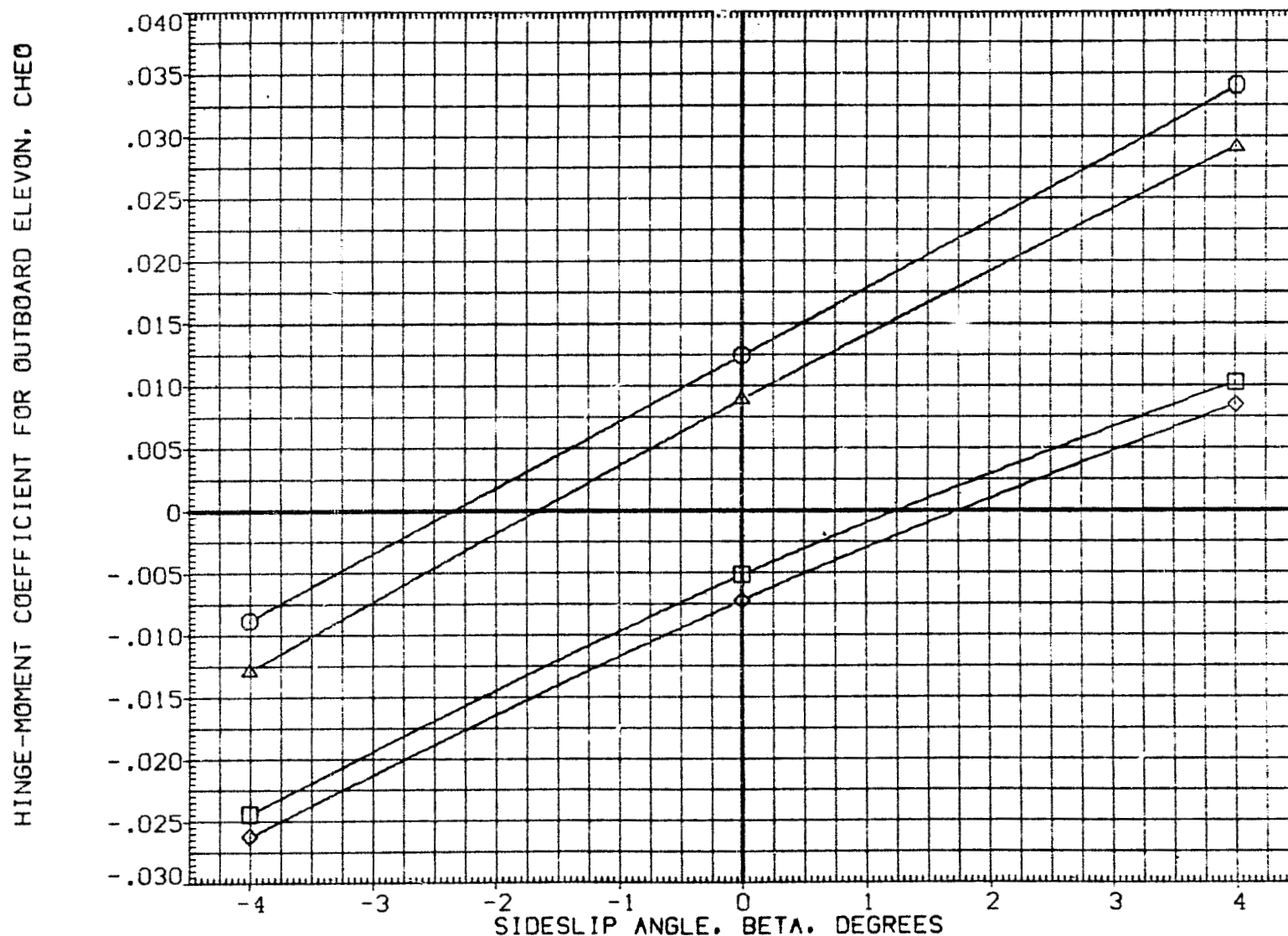


FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.25 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y23)	ARC 11-023 1A80 0TS (SRB NOM) (SSHE NOM)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y61)	ARC 11-023 1A80 0TS (SRB NOM) (SSHE NOM)	8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y72)	ARC 11-023 1A80 0TS (SRB NOM) (SSHE NOM)	8.000	-4.000	1.250	4.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

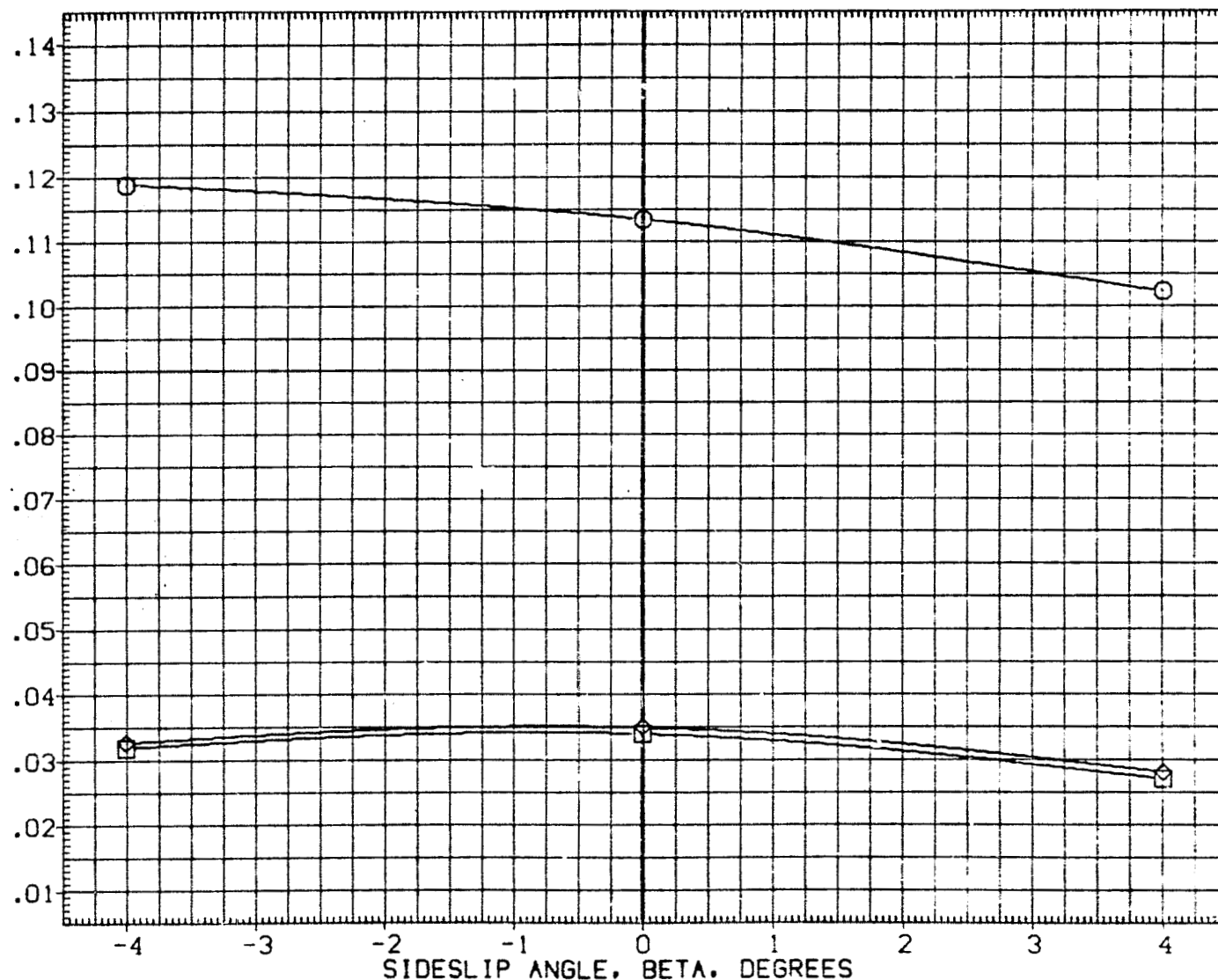


FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.25 PLUME ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y23) \square	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4Y61) \circ	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4Y72) \diamond	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
8.000	4.000	1.250	4.250	LREF	1290.3000 IN.
8.000	-4.000	1.250	4.250	BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

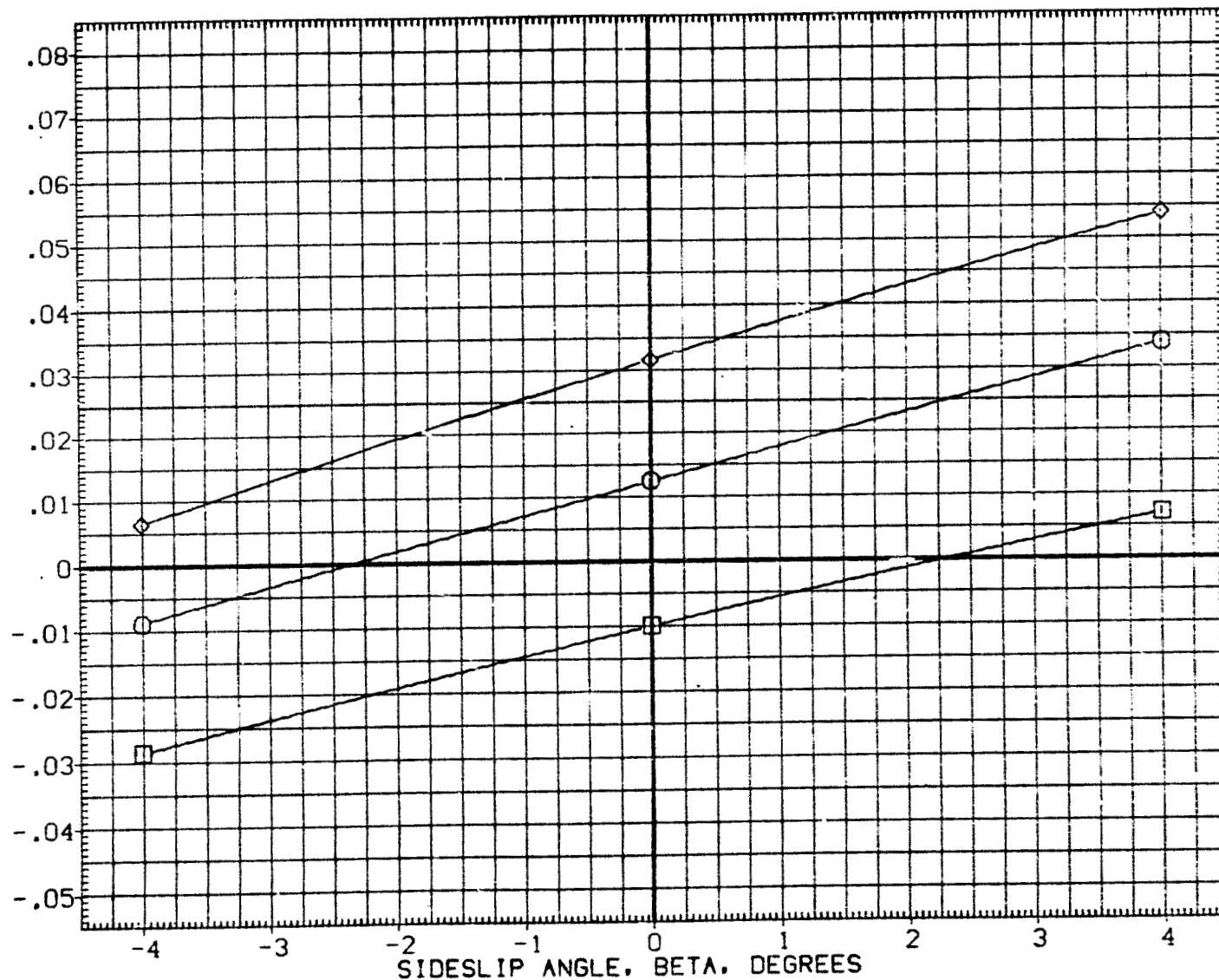


FIG. 42 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, 1.25 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-TB	ELV-DB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y24)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4YA9)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y99)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y83)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

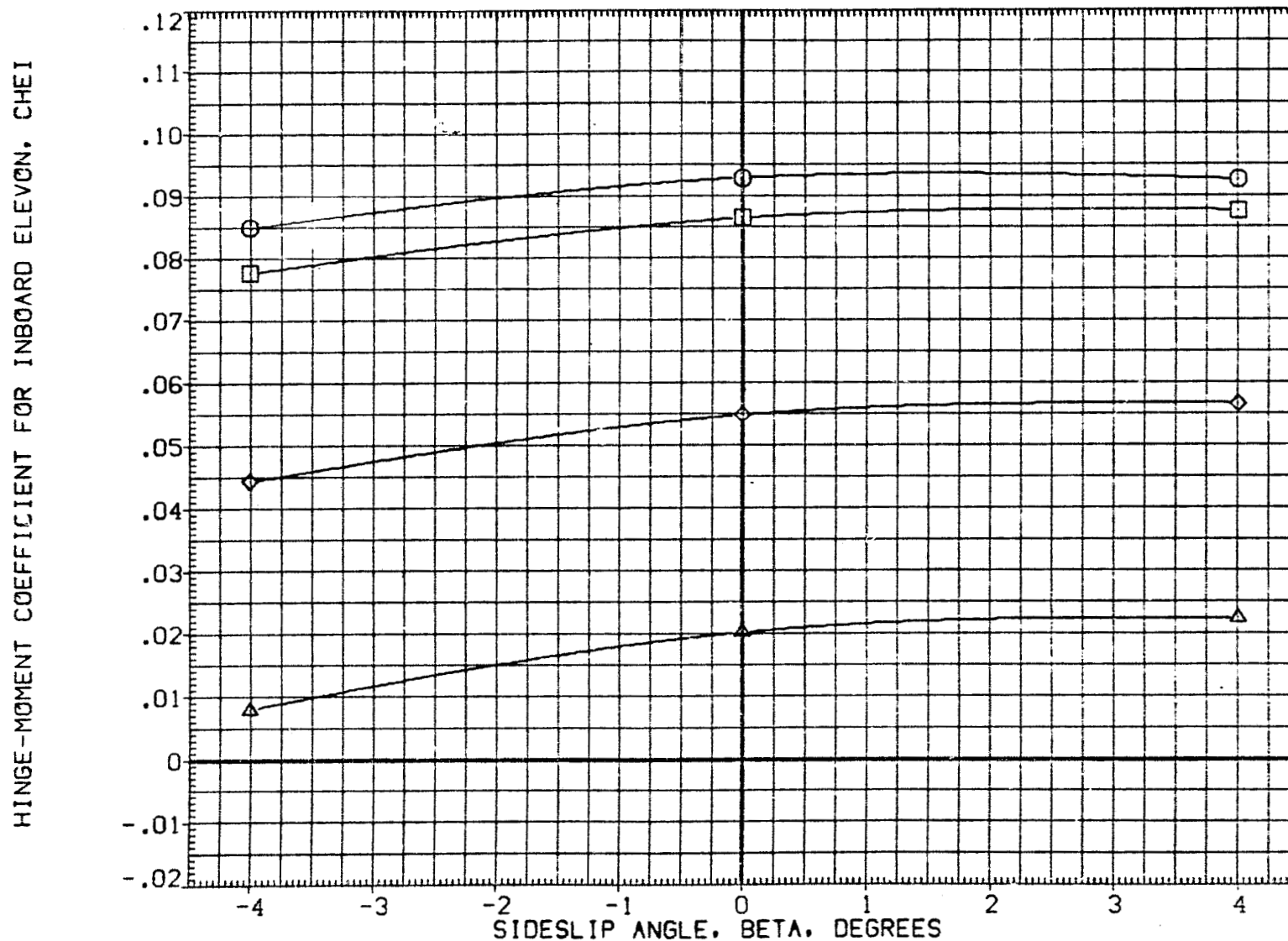


FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.4 PLUME ON
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4YA9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	1.400	4.250	LREF	1290.0000	IN.
(RE4Y99)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	1.400	4.250	BREF	1290.0000	IN.
(RE4Y83)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	1.400	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

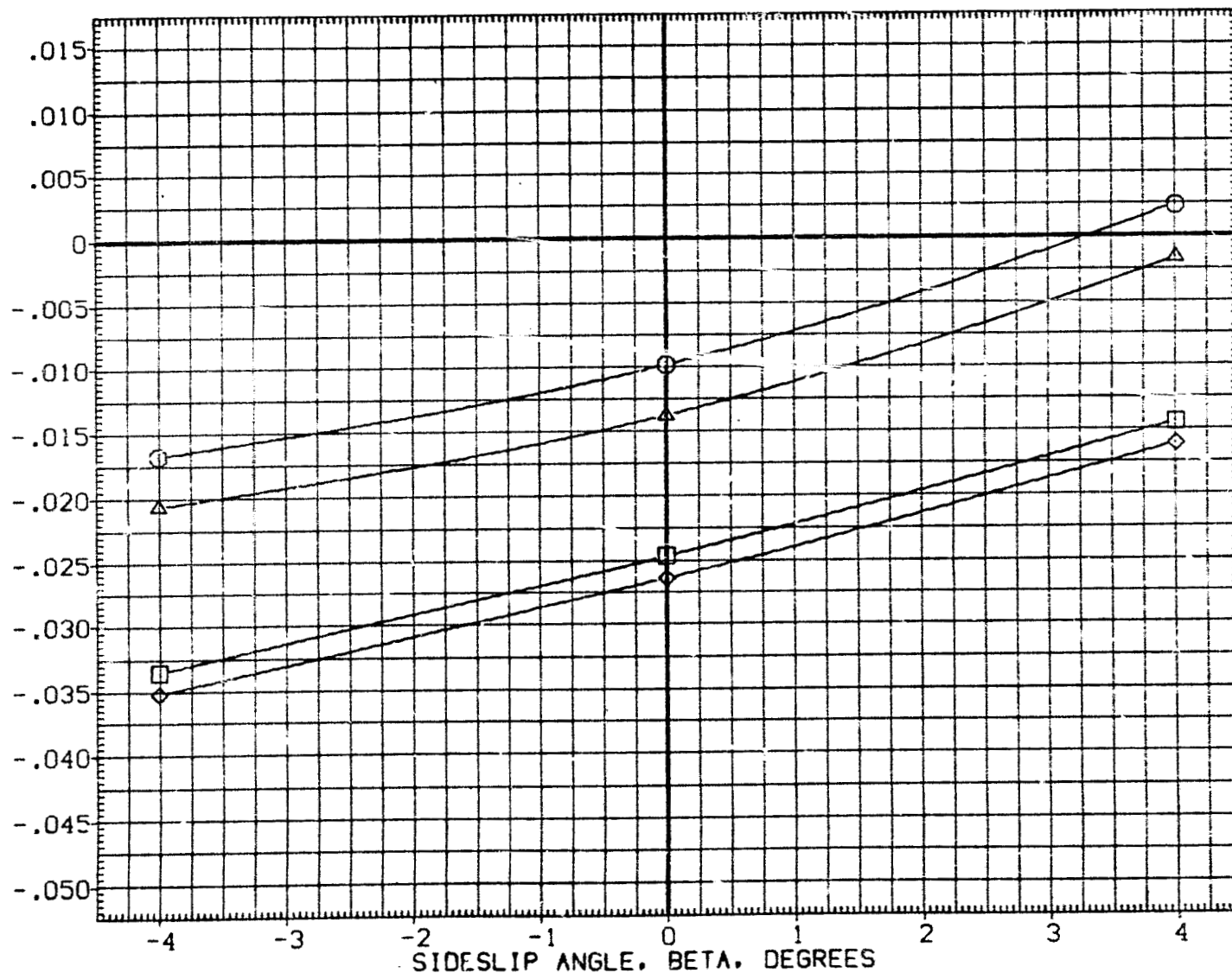


FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, $M=1.4$ PLUME ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)
(RE4Y62)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	LREF	1290.3000 IN.
				BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

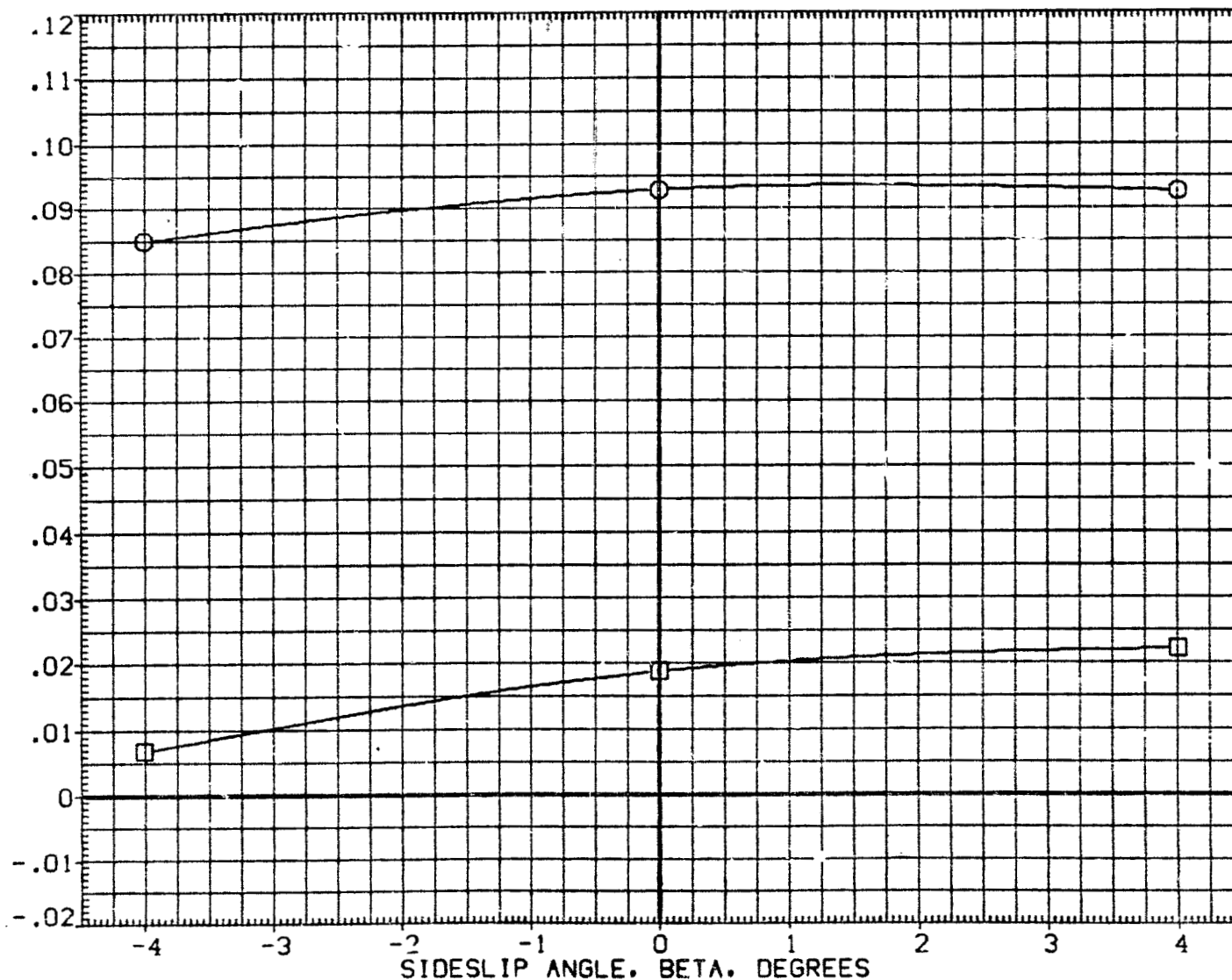


FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, M=1.4 PLUME ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y24) \square	ARC 11-023 IABO DTS (SRB NOM) (SSME NOM)
(RE4Y62) \square	ARC 11-023 IABO DTS (SRB NOM) (SSME NOM)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
8.000	4.000	1.400	4.250	UREF 1290.3000 IN.
				BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

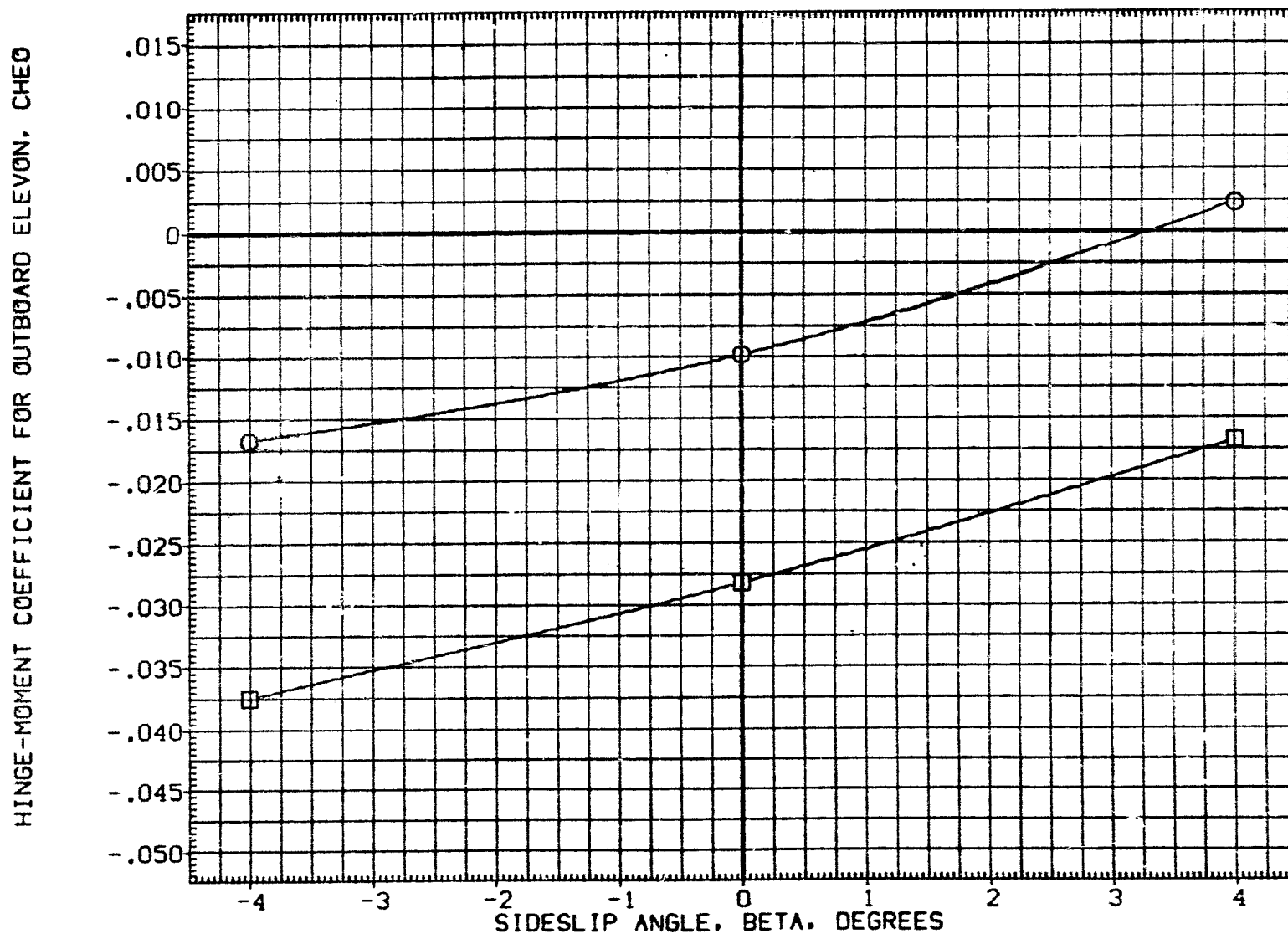


FIG. 43 EFFECT OF ELEVON SETTING ON ELEVON HINGE MOMENTS IN YAW, $M=1.4$ PLUME ON
 (A) $\alpha = .00$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SG.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.090	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

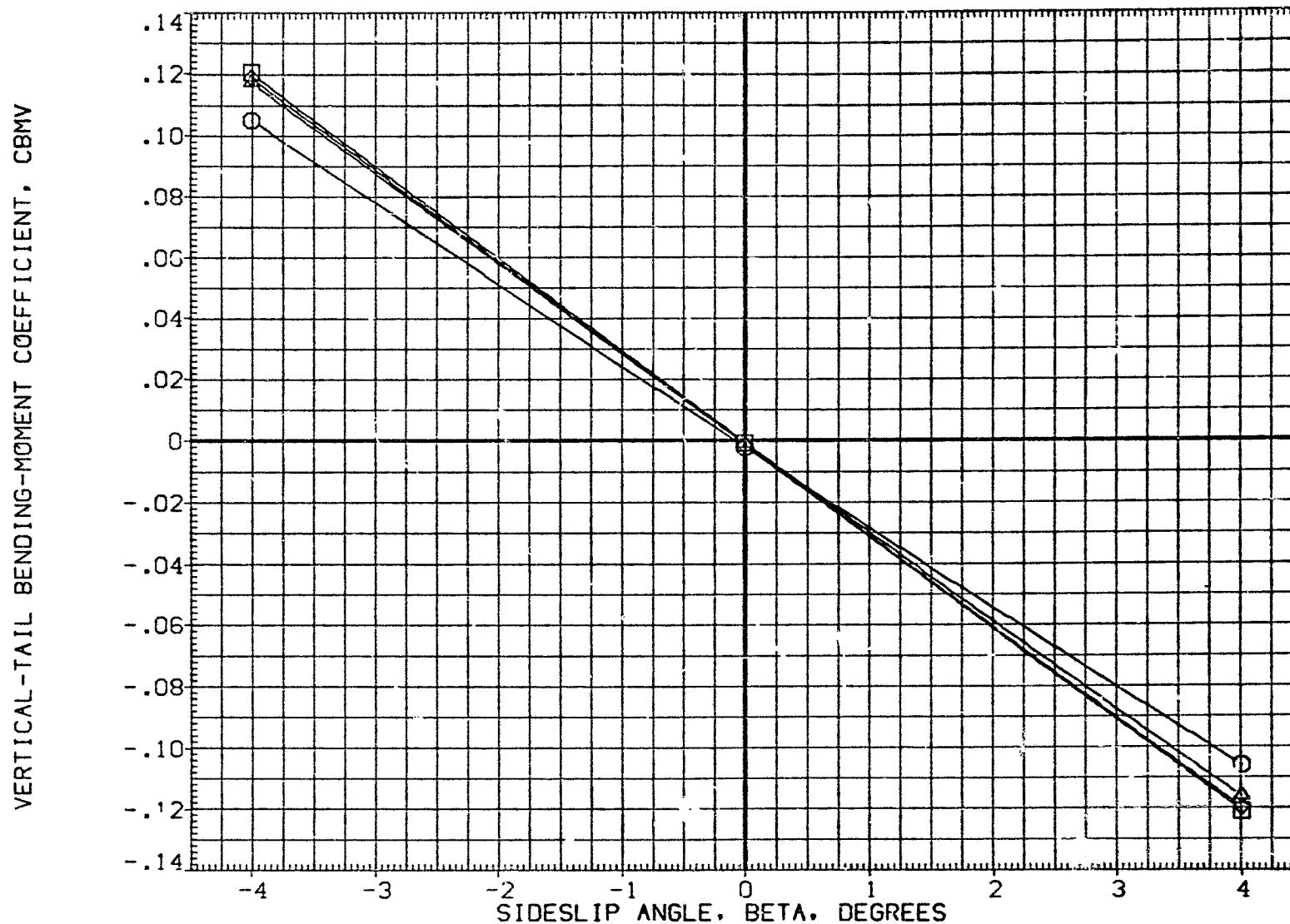


FIG. 44 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.6

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y20)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y11)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y85)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000 IN.
							YMRP	.0000 IN.
							ZMRP	.0000 IN.
							SCALE	.0200

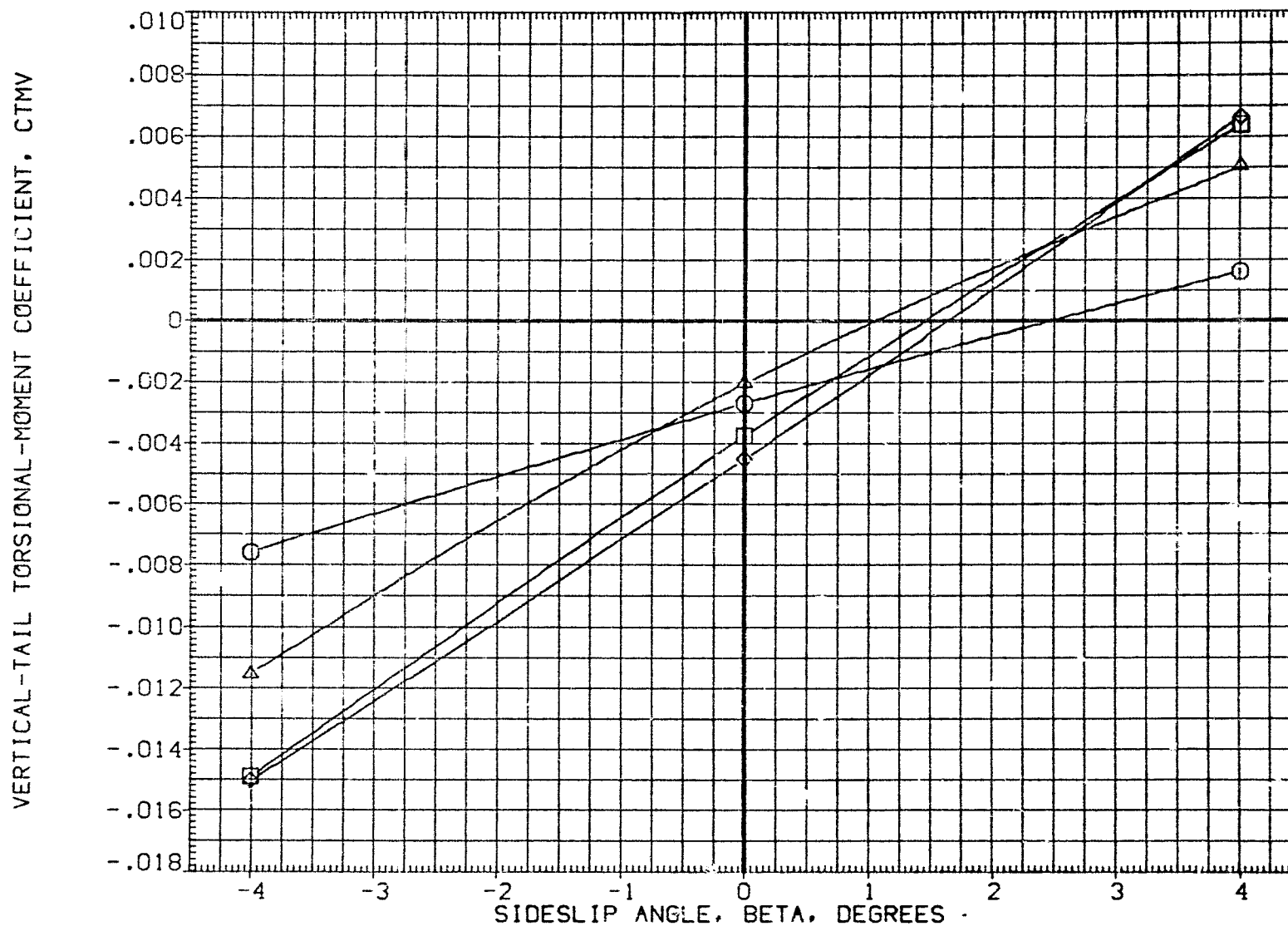


FIG. 44 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

VERTICAL-TAIL SIDE-FORCE COEFFICIENT, CYV

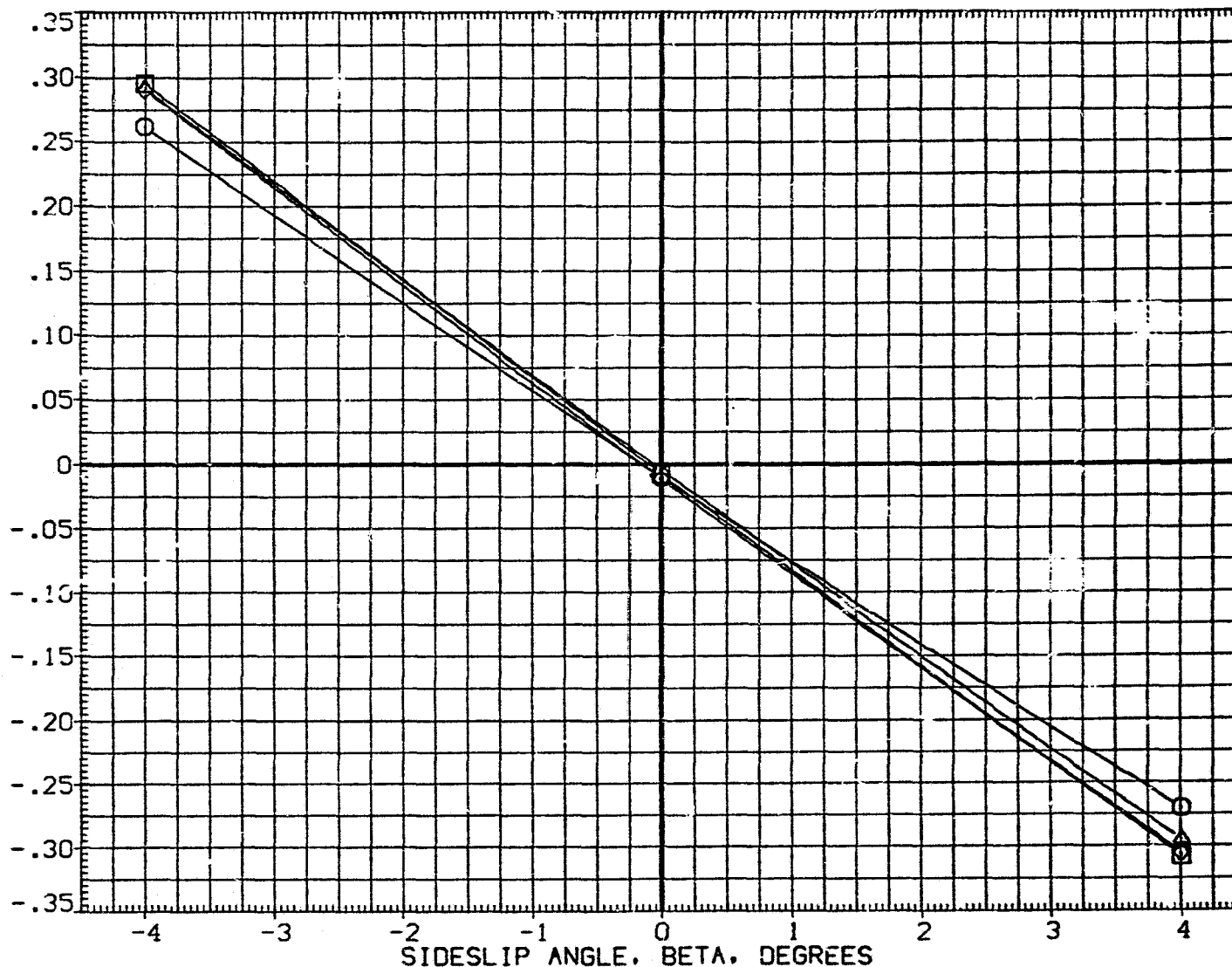


FIG. 44 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	30.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4YB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

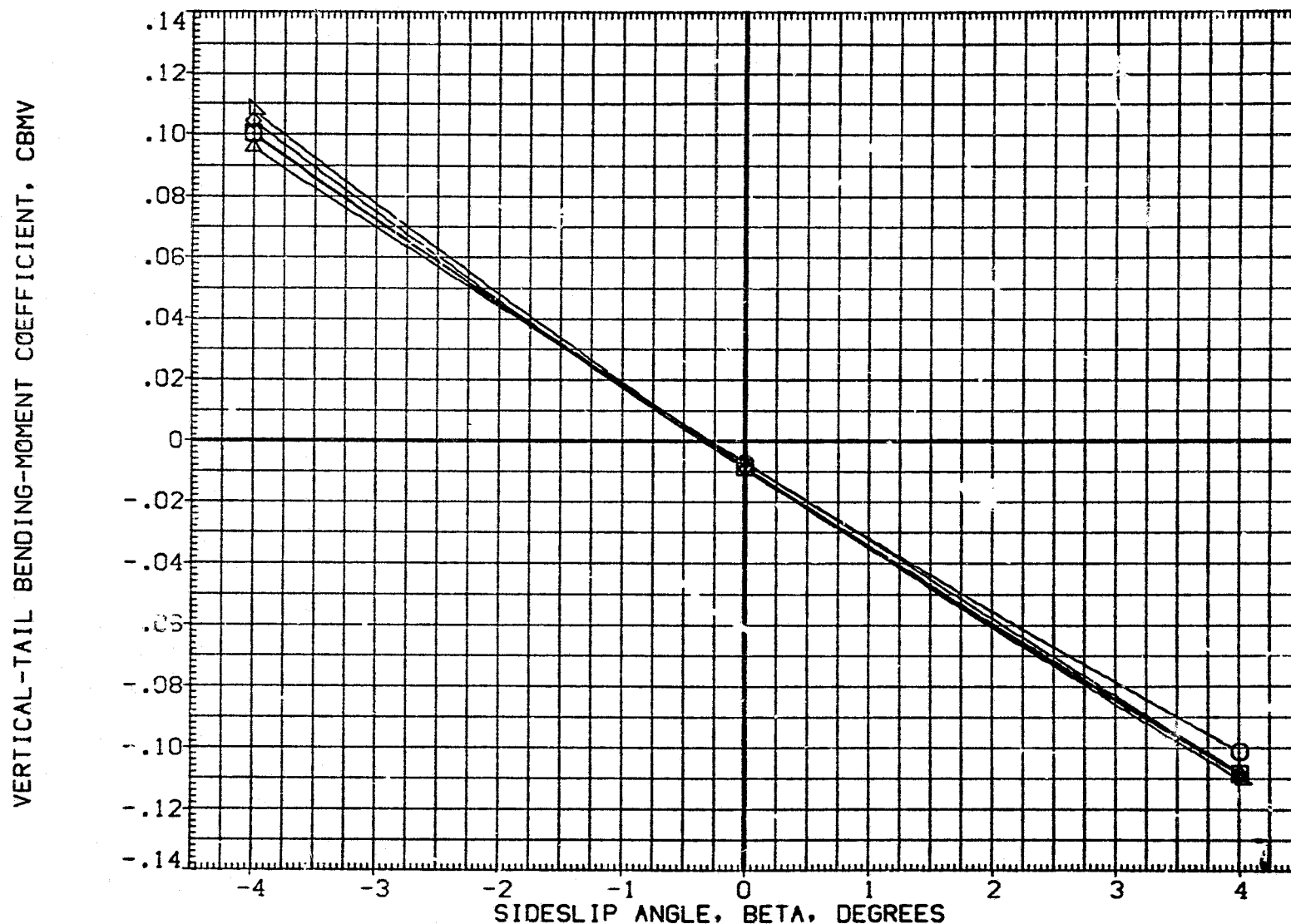


FIG. 45 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4YB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NU. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

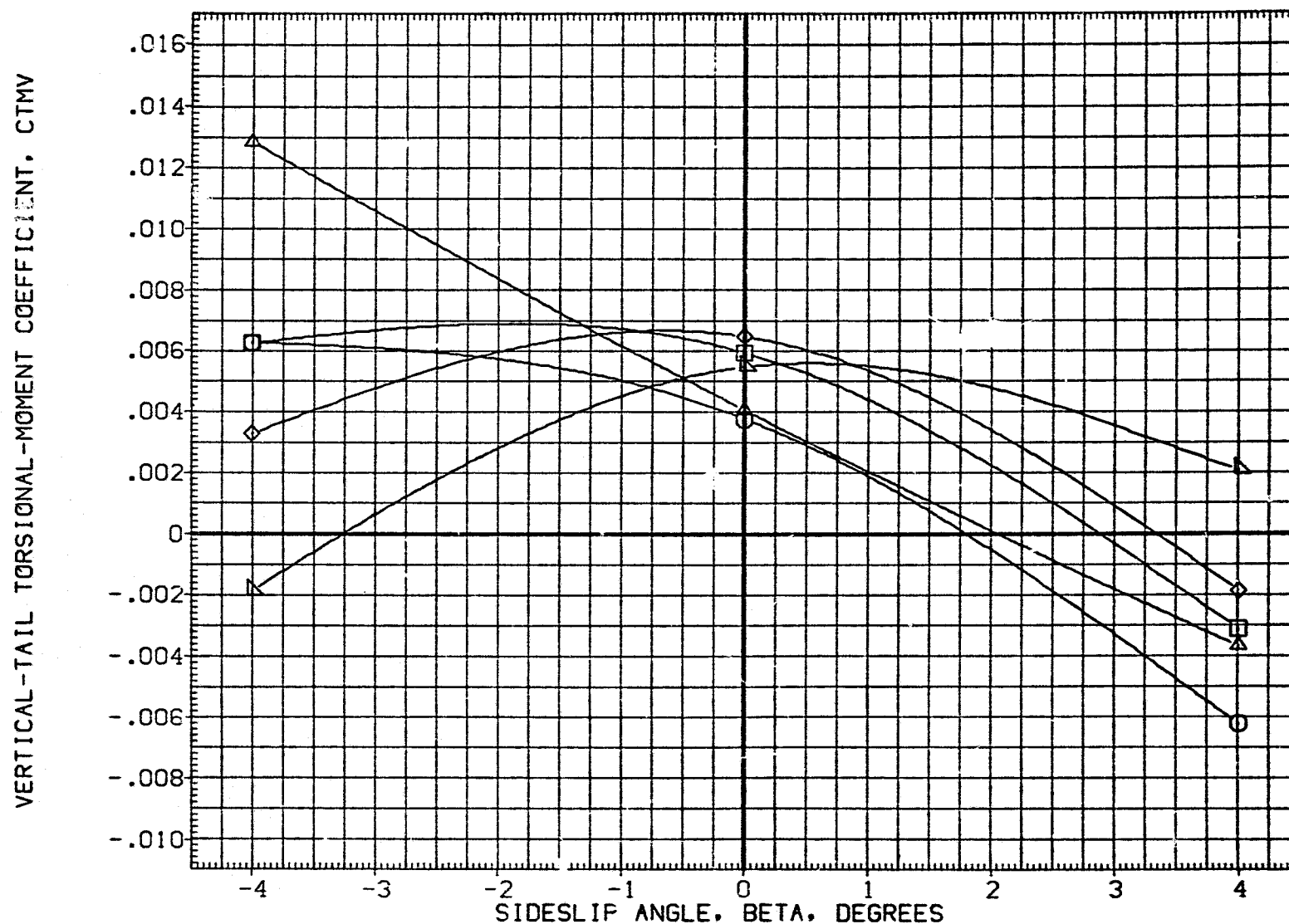


FIG. 45 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y21)	ARC 11-023 1A80 01S (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y16)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y12)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	YMRP	.0000 IN.
(RE4Y06)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	ZMRP	.0000 IN.
						SCALE	.0200

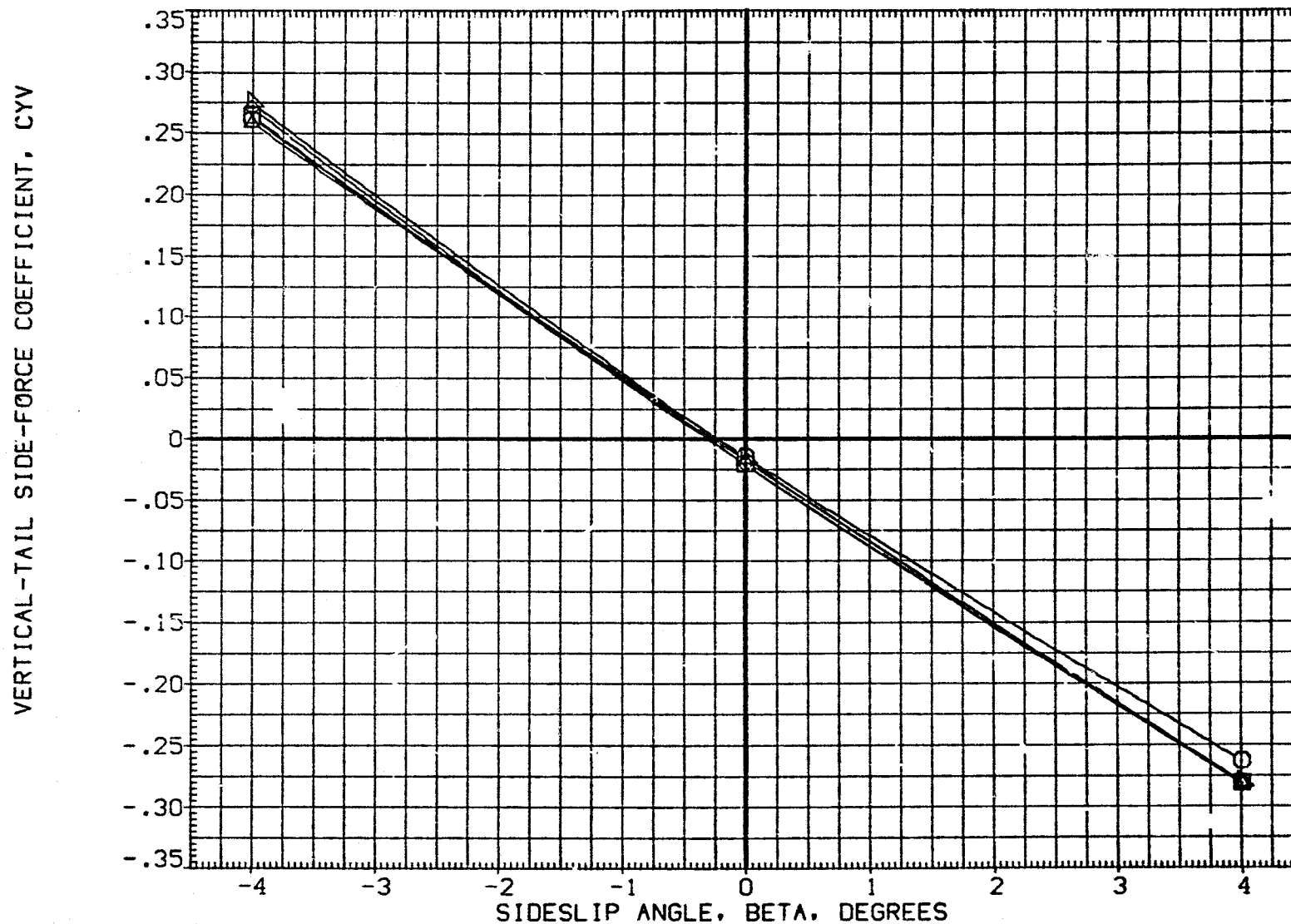


FIG. 45 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

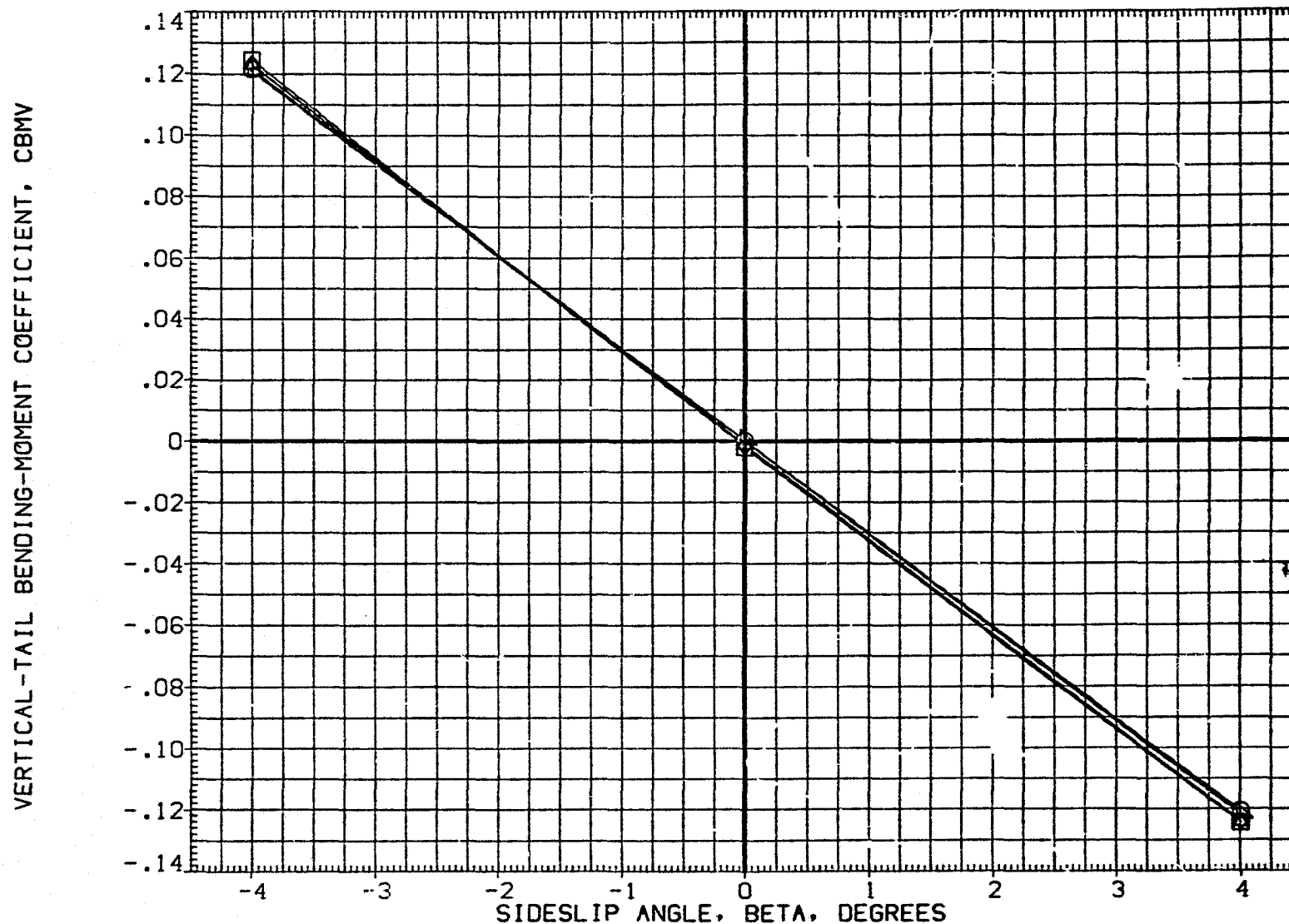


FIG. 46 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.300	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

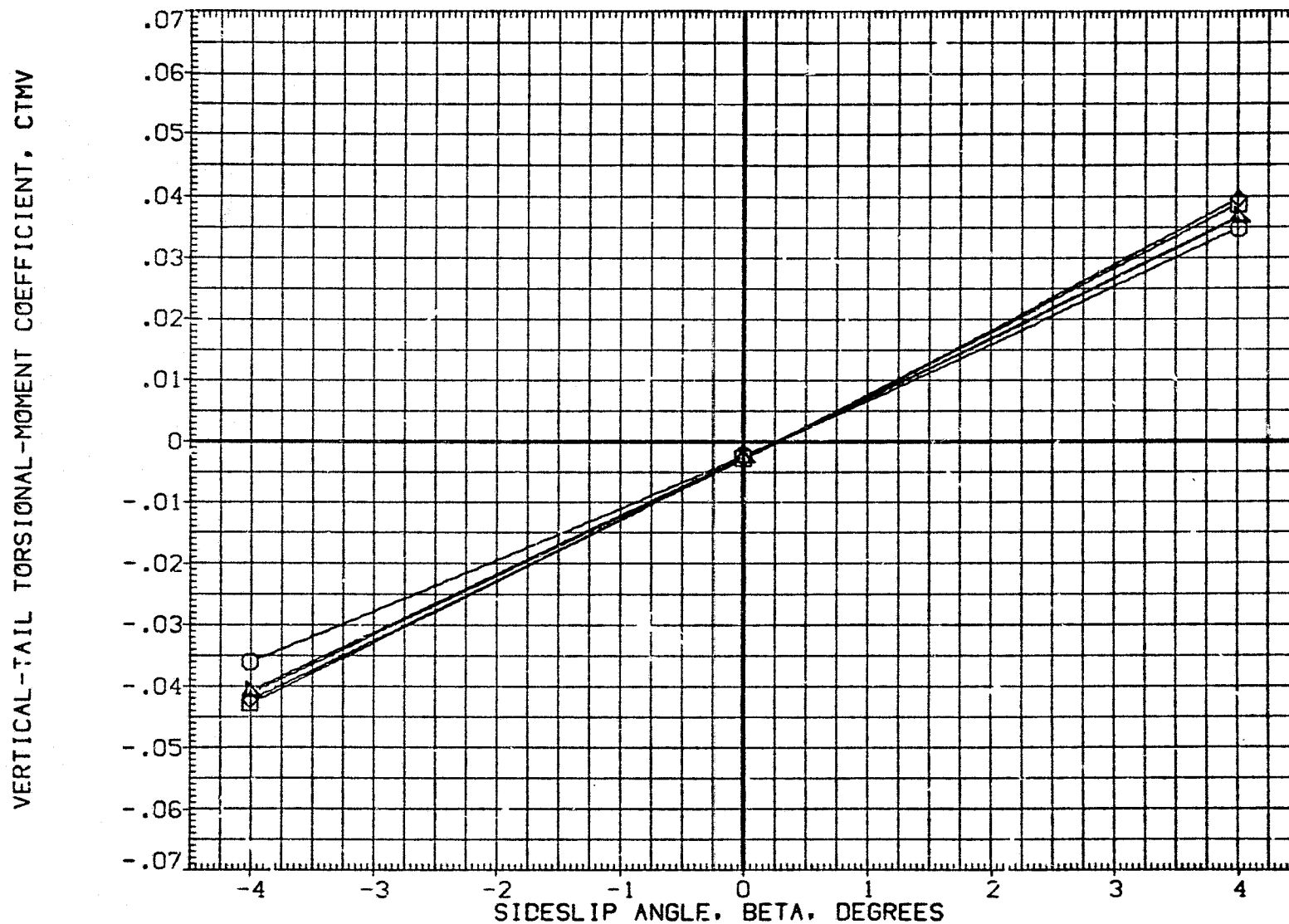


FIG. 46 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.1

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y22)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y13)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

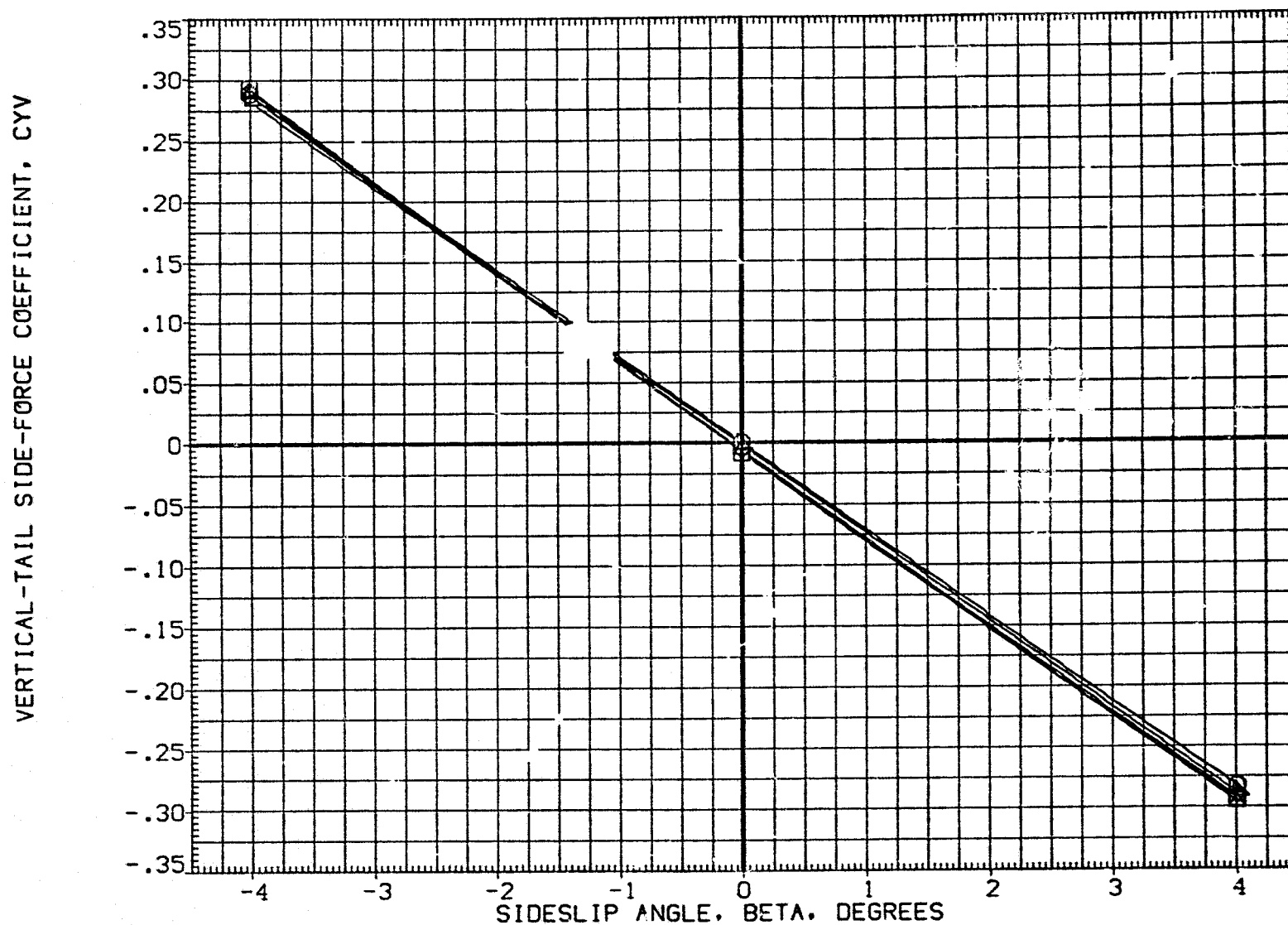


FIG. 46 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF 1290.3000 IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF 1290.3000 IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP .0000 IN.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

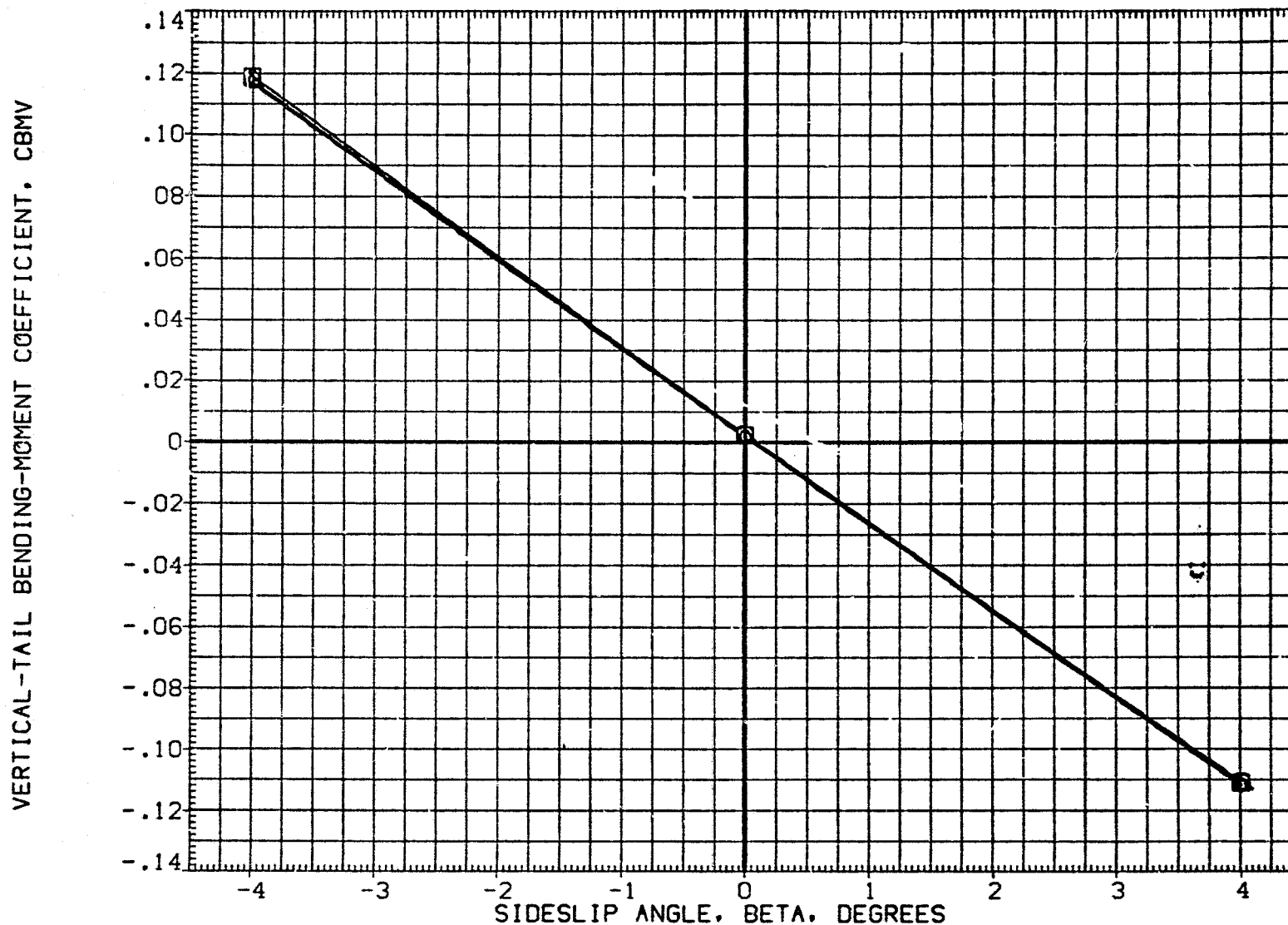


FIG. 47 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.25
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4YB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

VERTICAL-TAIL TORSIONAL-MOMENT COEFFICIENT, CTMV

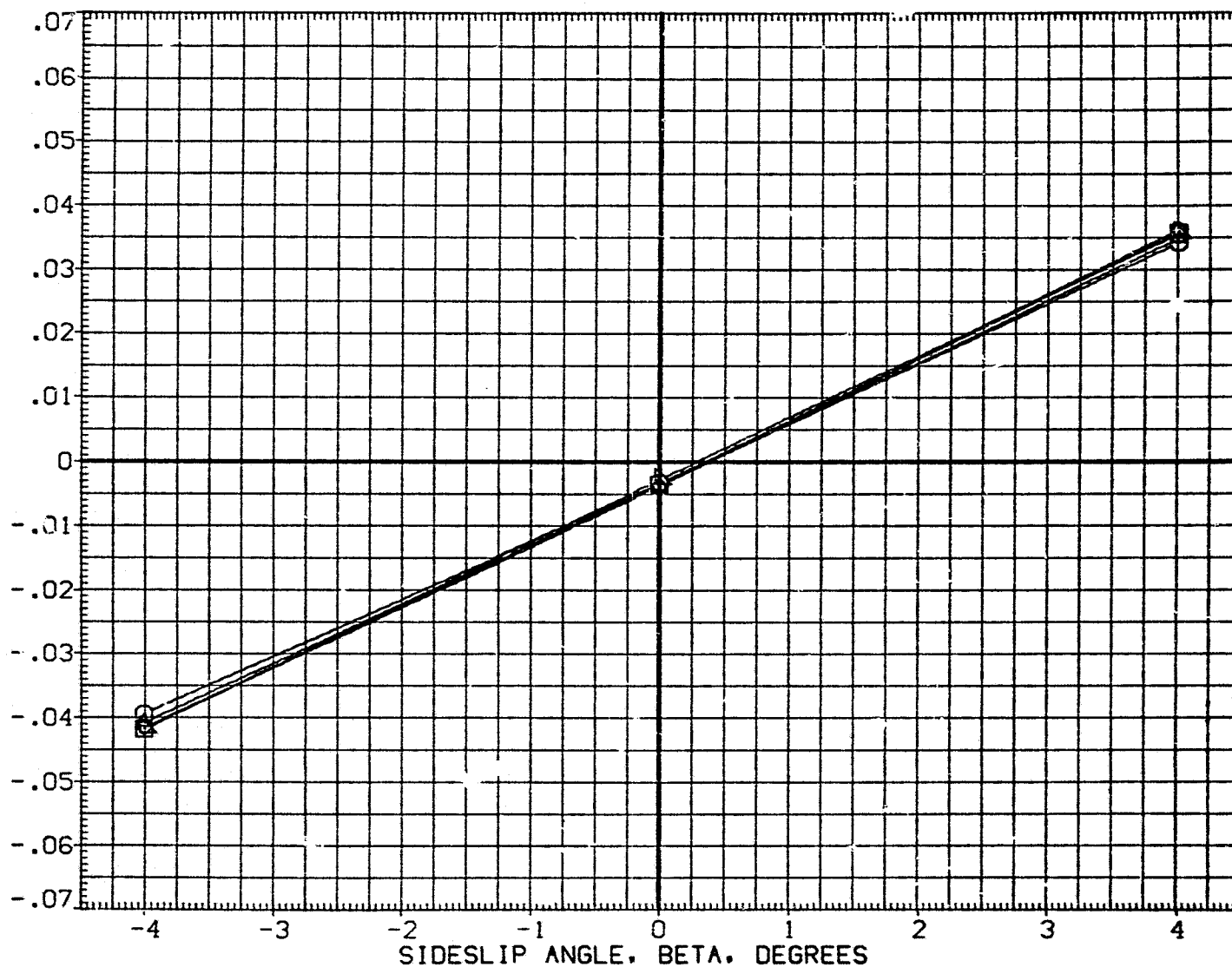


FIG. 47 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SF OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

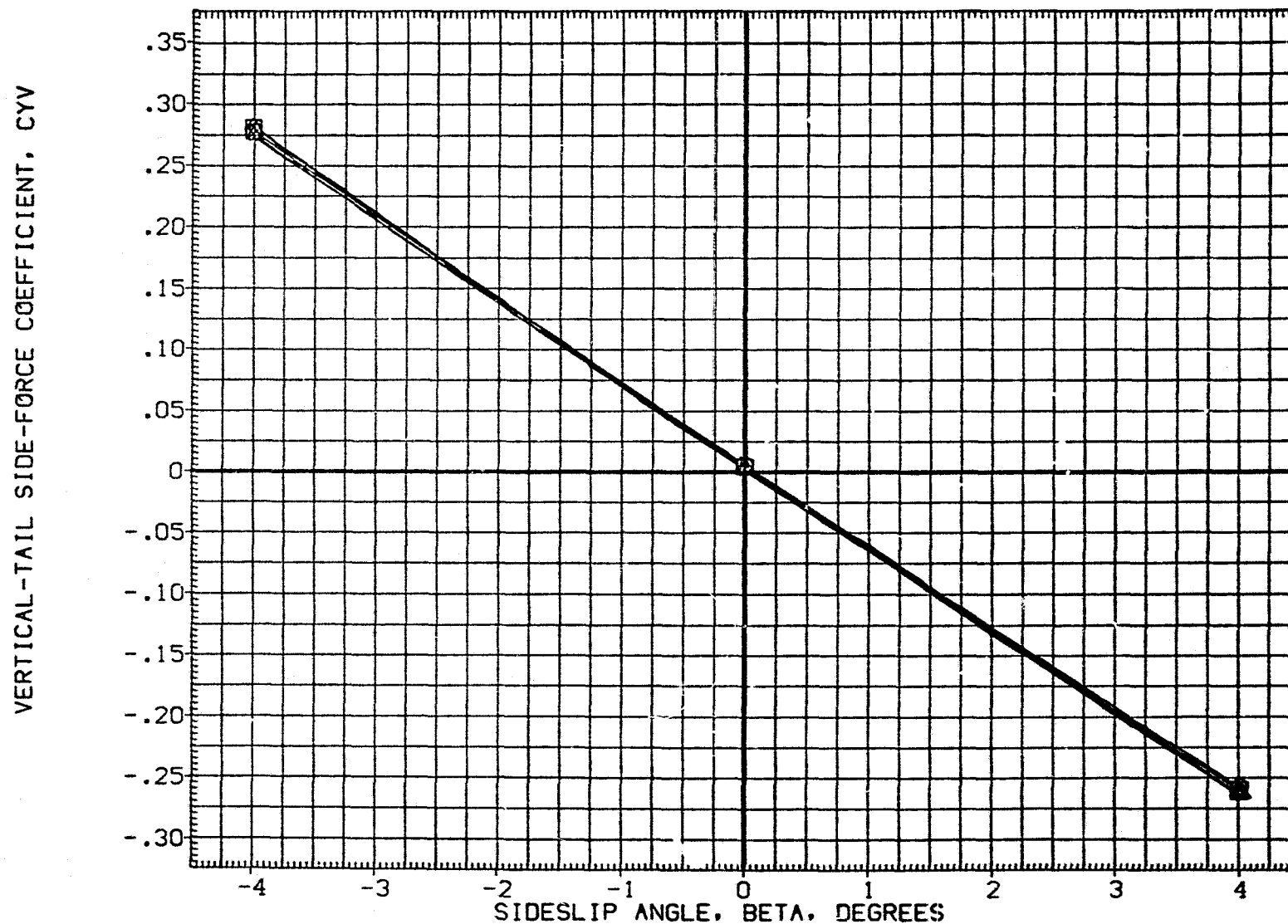


FIG. 47 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	Ri: / L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4Y24)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y19)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y15)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4YB9)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

VERTICAL-TAIL BENDING-MOMENT COEFFICIENT, CBMV

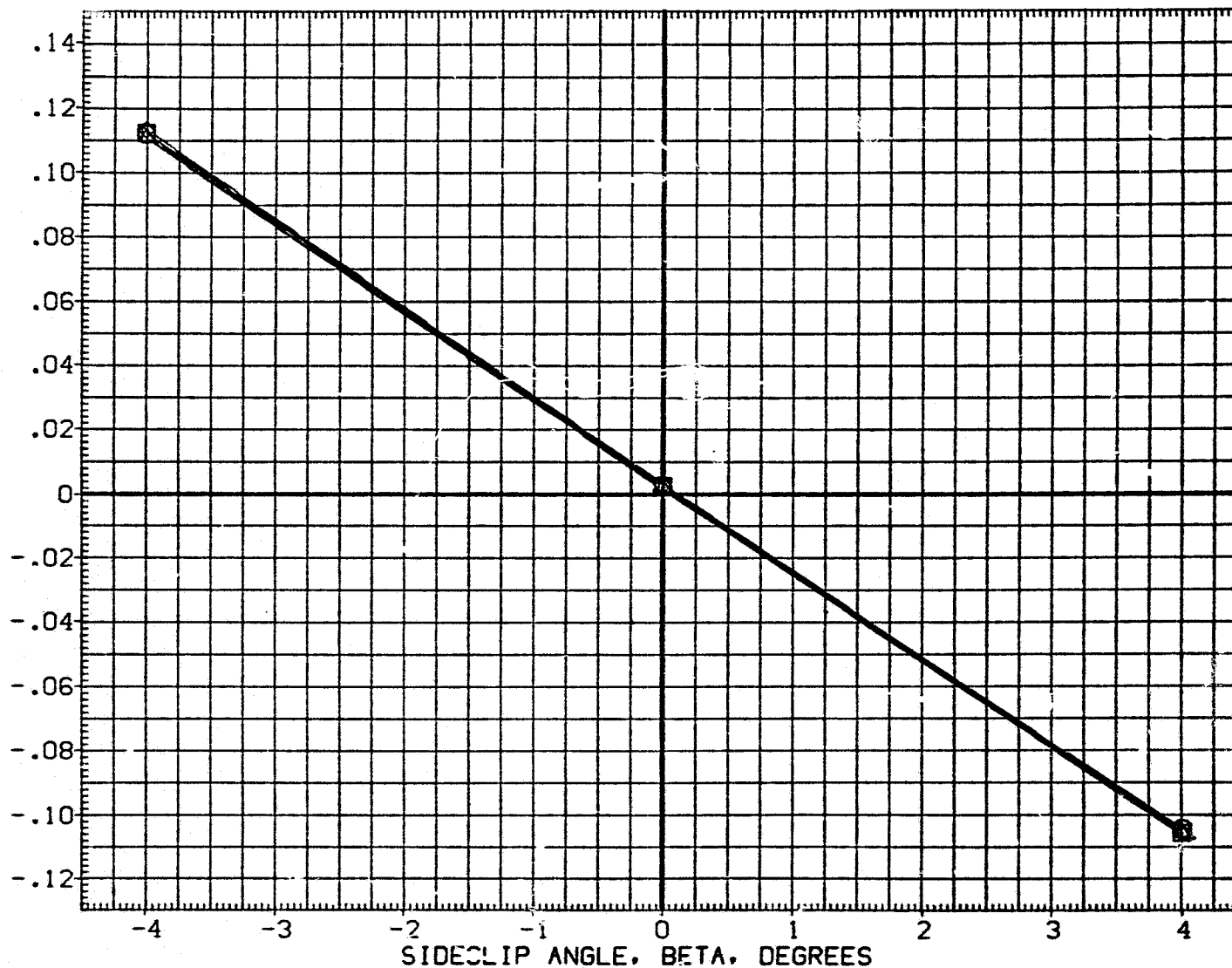


FIG. 48 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4Y24)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y19)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y15)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4YB9)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

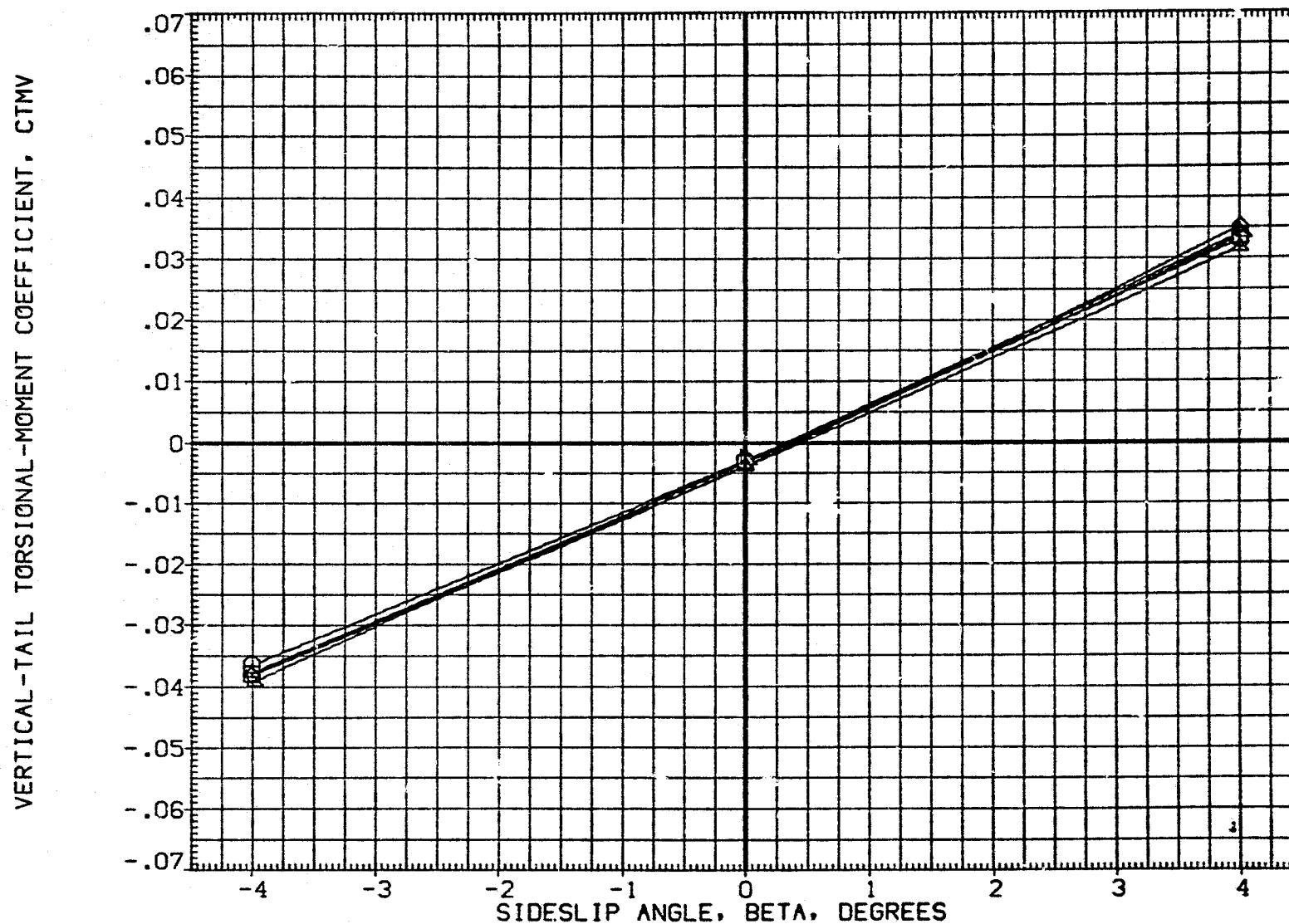


FIG. 48 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF 1290.3000 IN.
(RE4Y19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF 1290.3000 IN.
(RE4Y15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP .0000 IN.
(RE4YB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

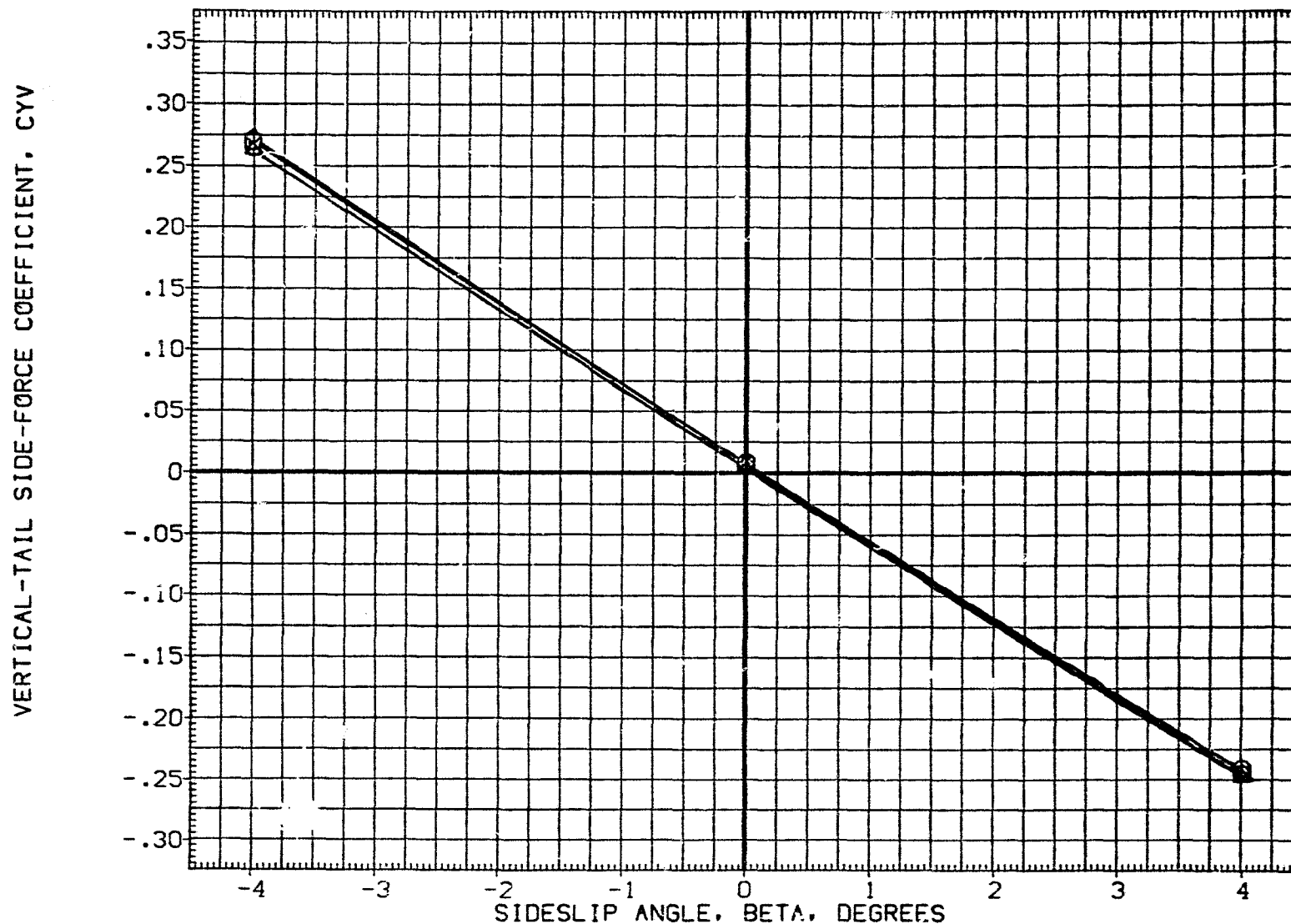


FIG. 48 PLUME EFFECTS ON VERTICAL TAIL LOADS, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IR	ELV-OR	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.300	3.400	SREF	2690.0000	SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

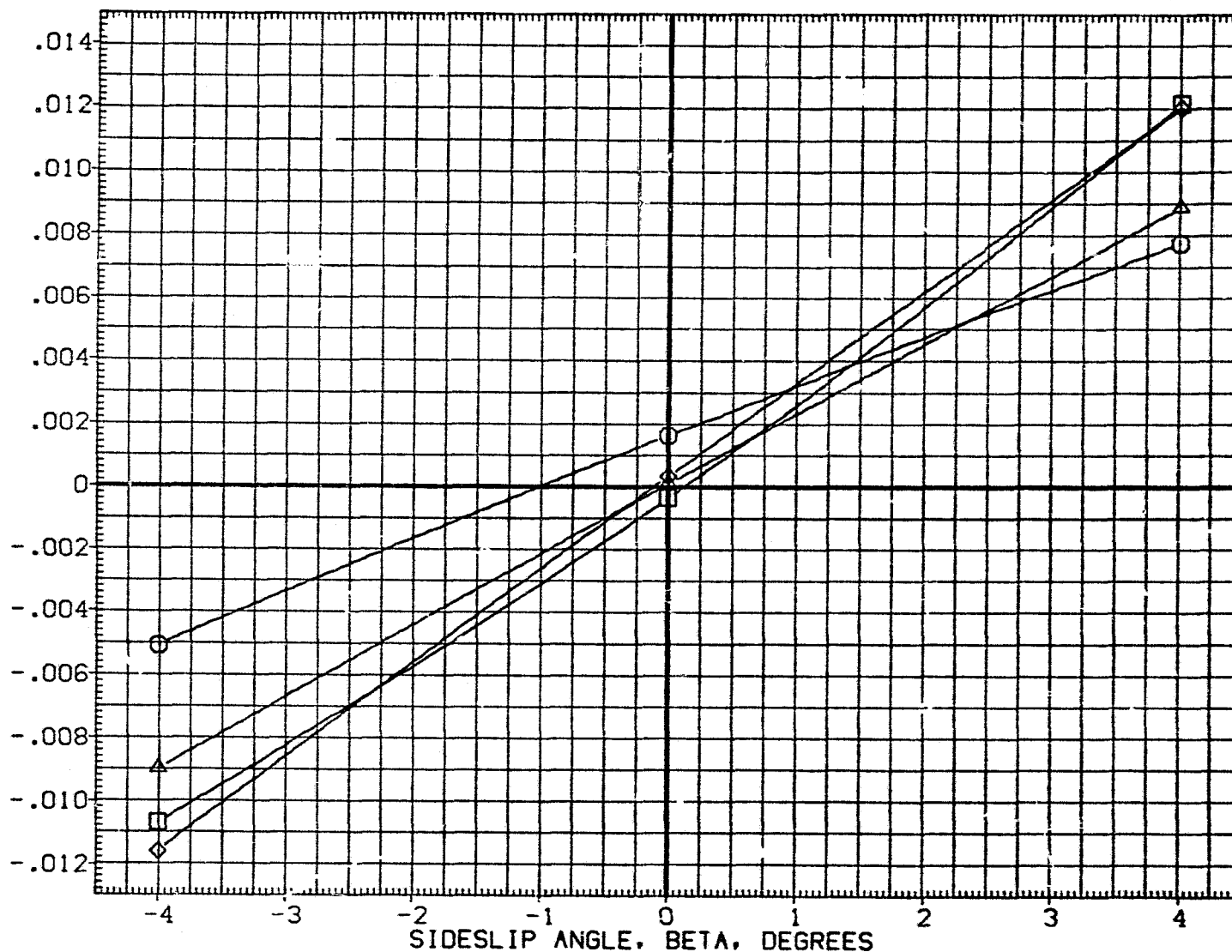


FIG. 49 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4Y86)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

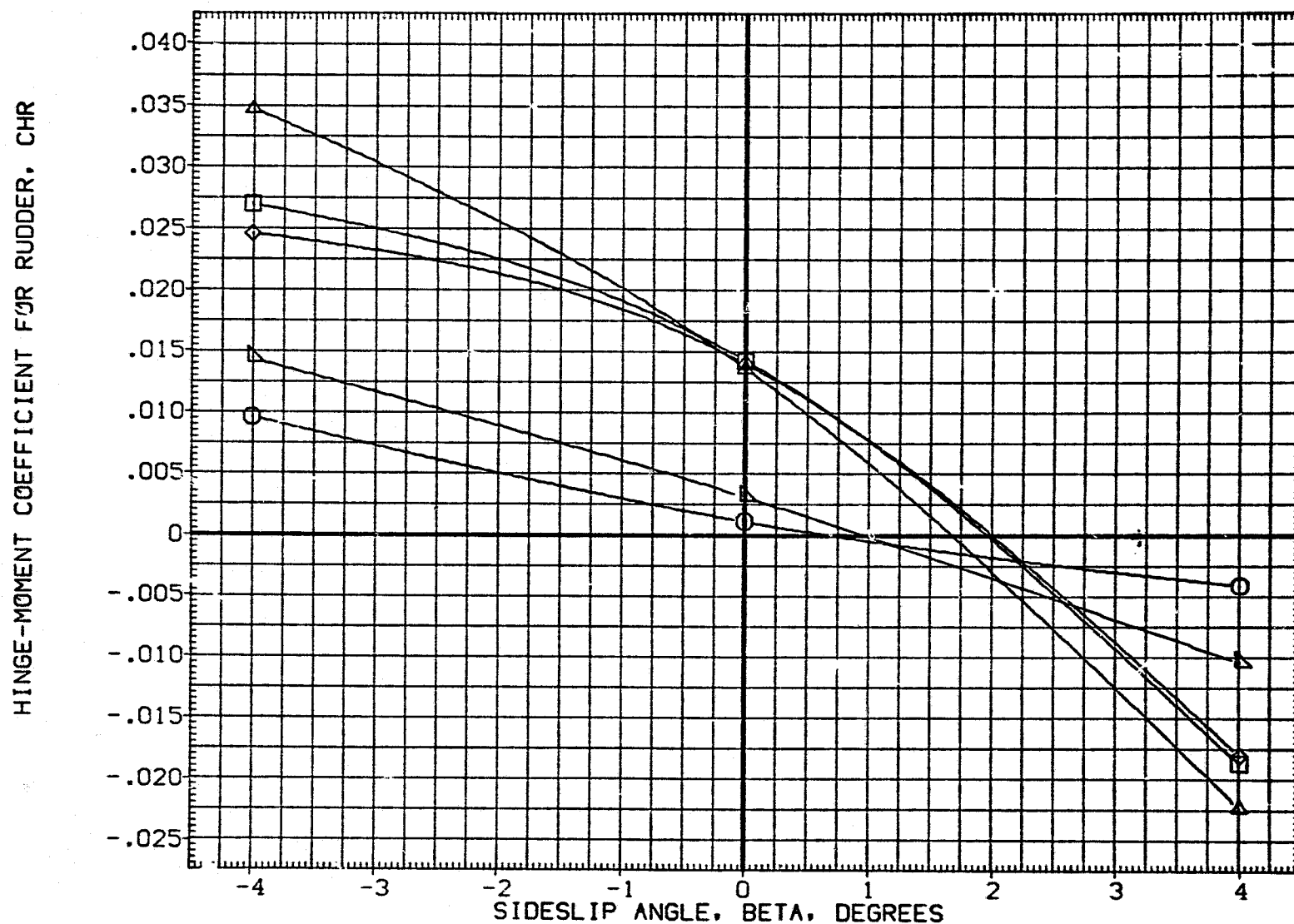


FIG. 50 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

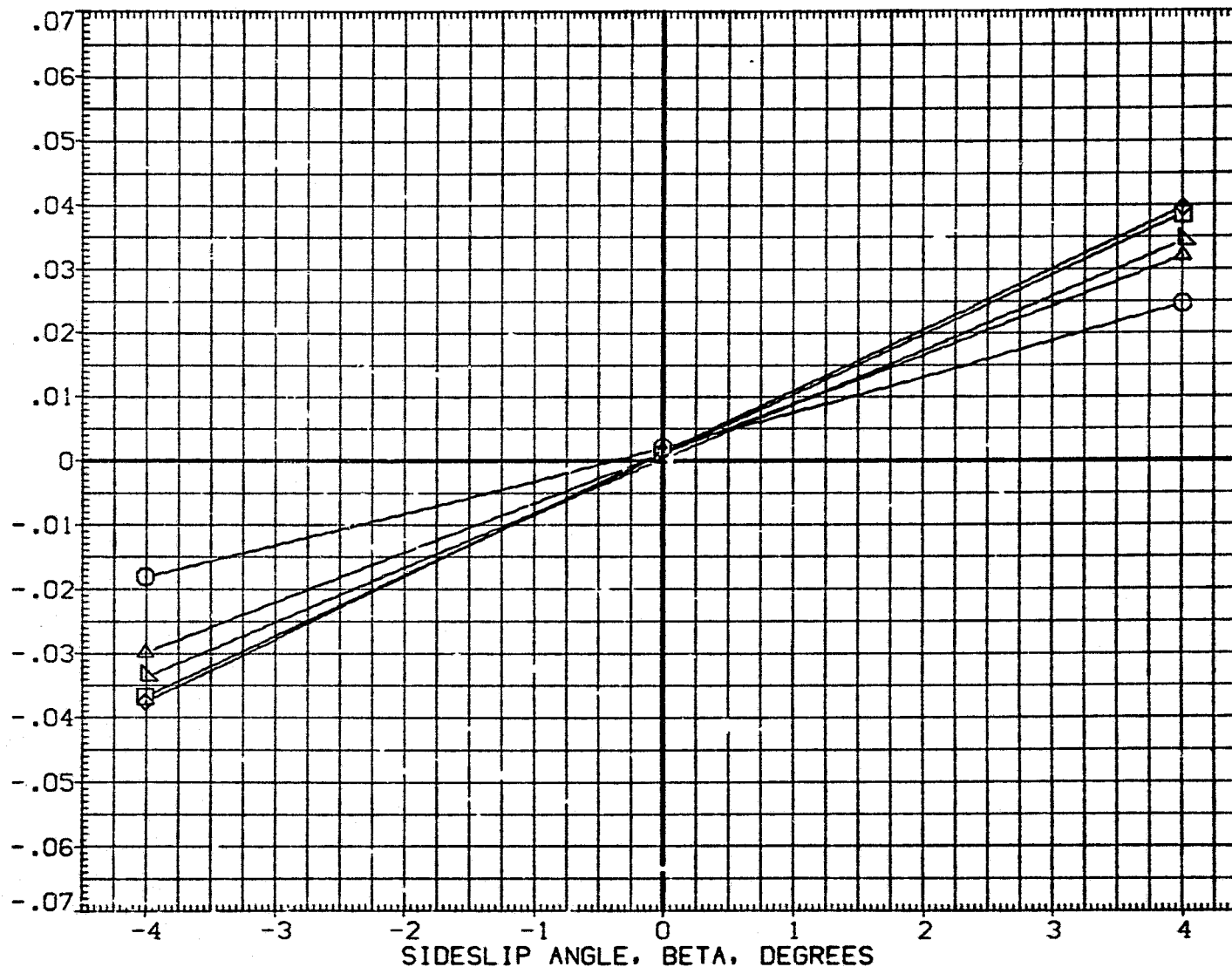


FIG. 51 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

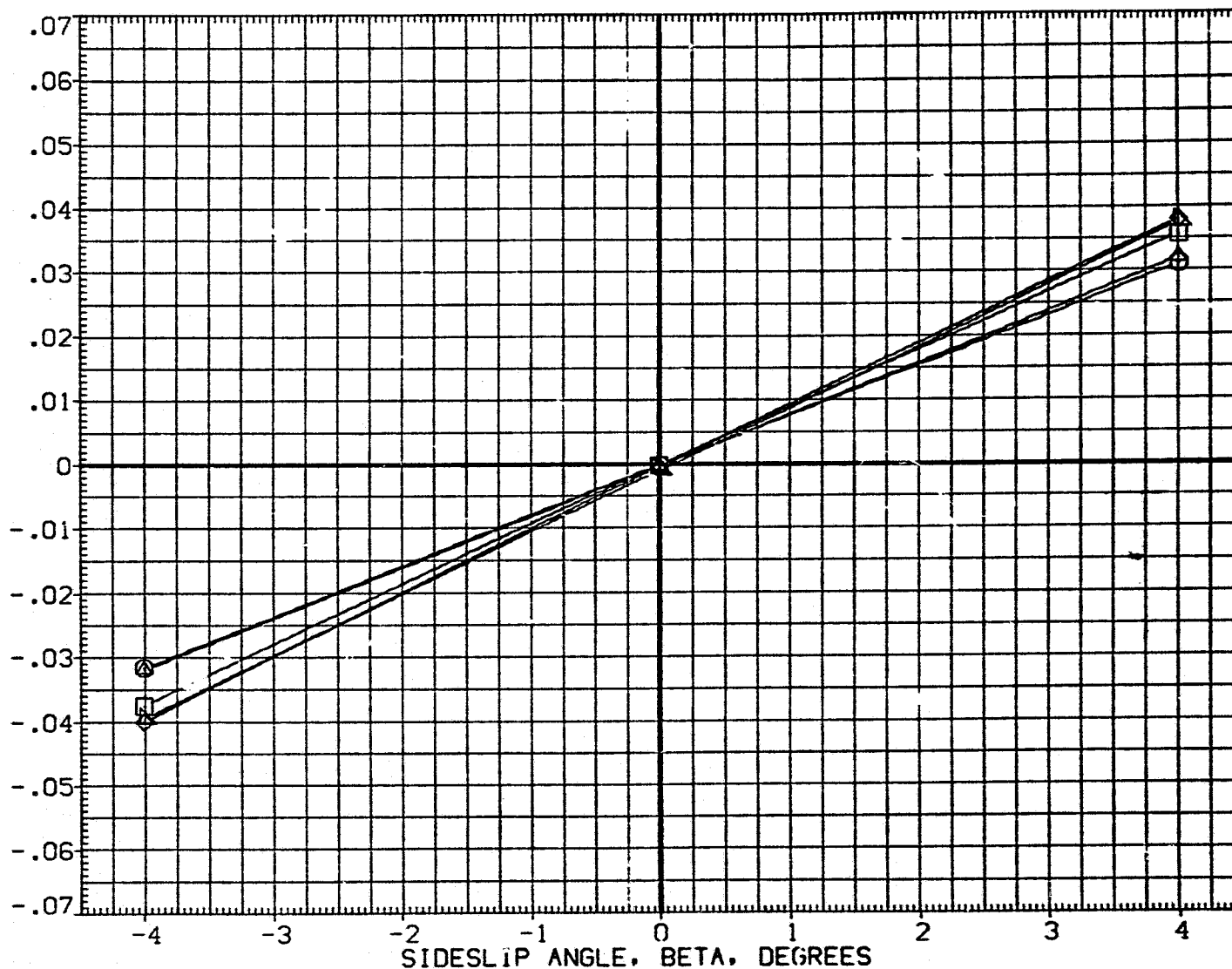


FIG. 52 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4YB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

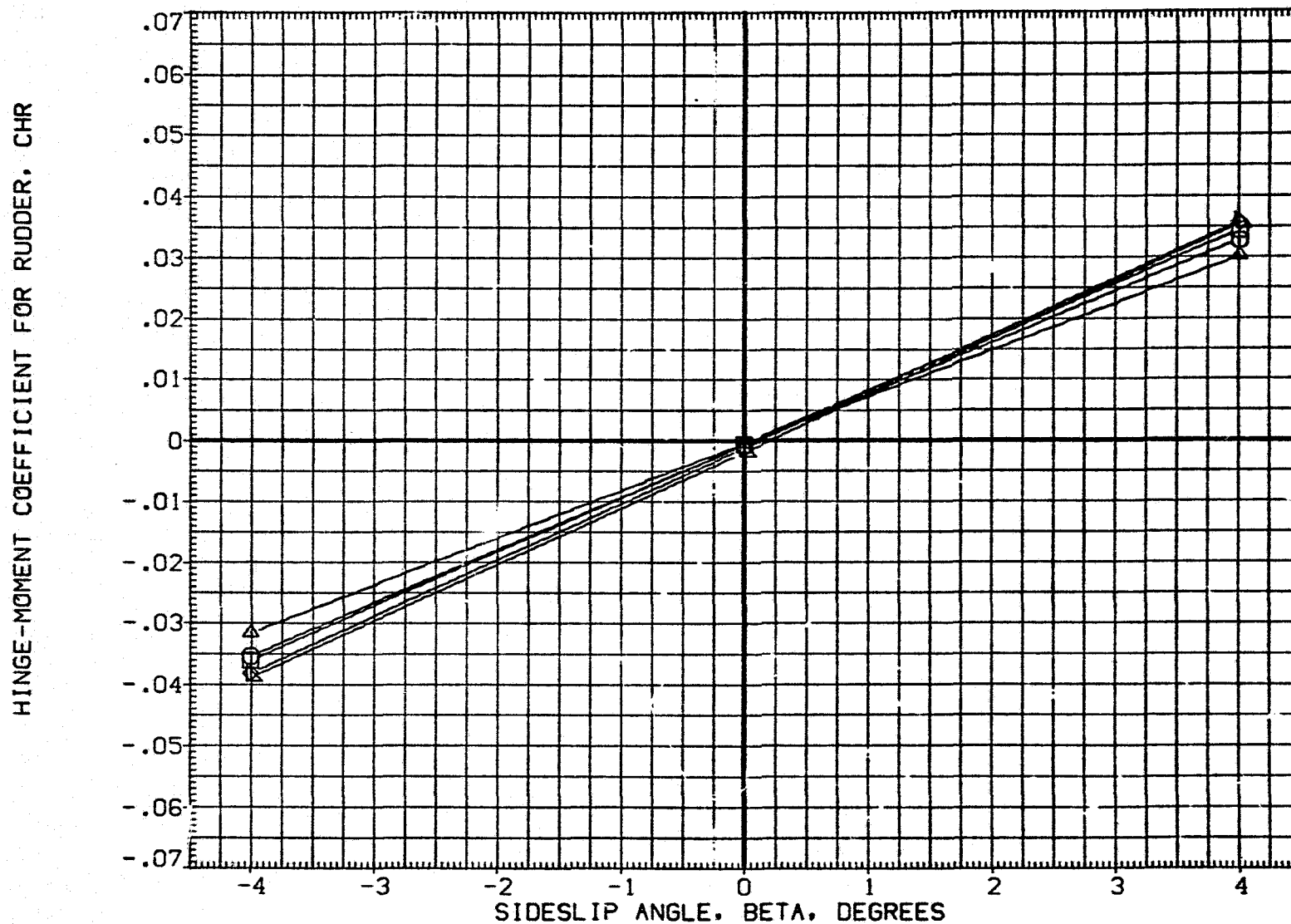


FIG. 53 PLUME EFFECTS ON RUDDER HINGE MOMENT, MACH=1.4

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4X20)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4X06)	×	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4X01)	△	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

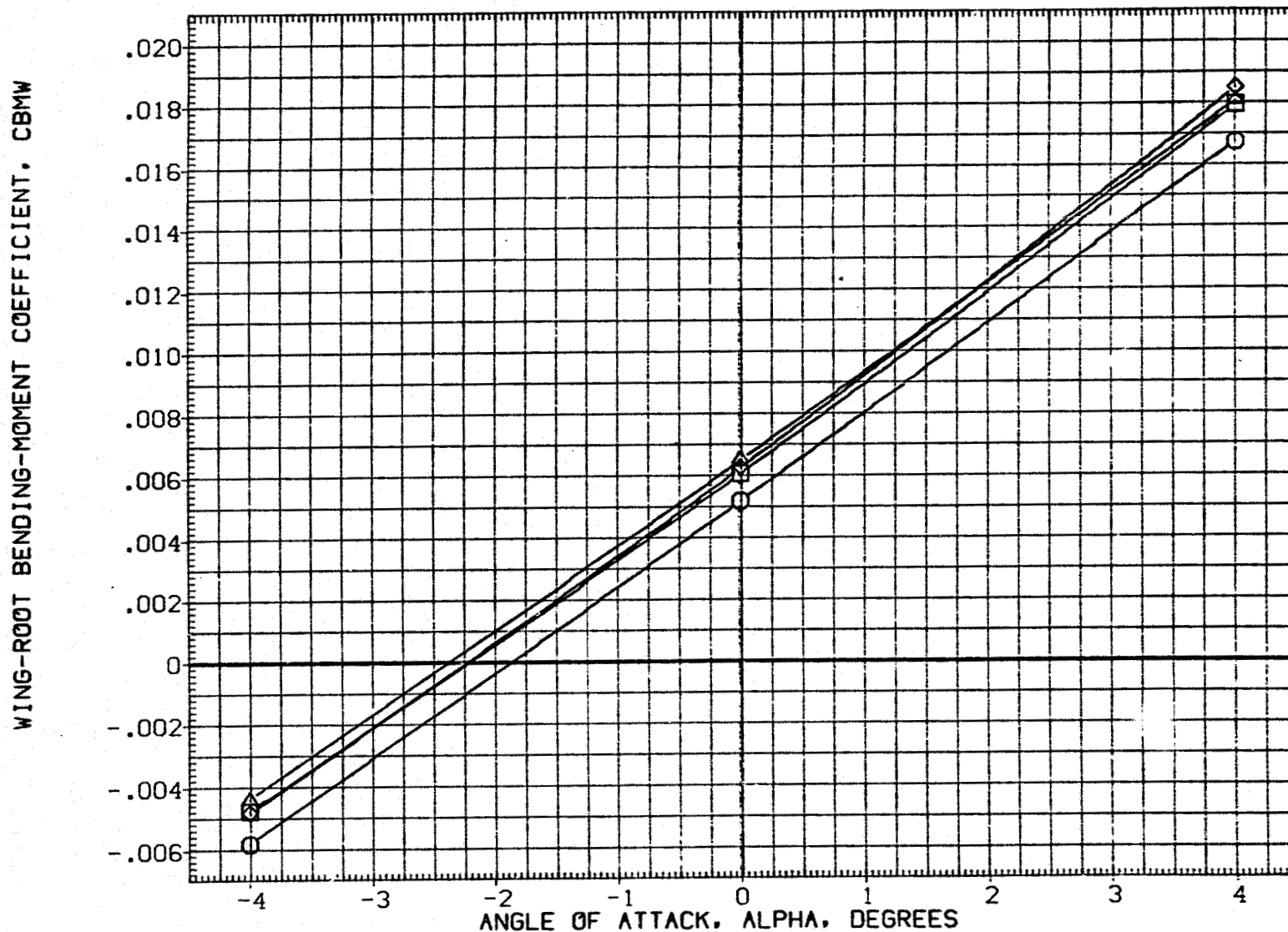


FIG. 54 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SG.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4X06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4X01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

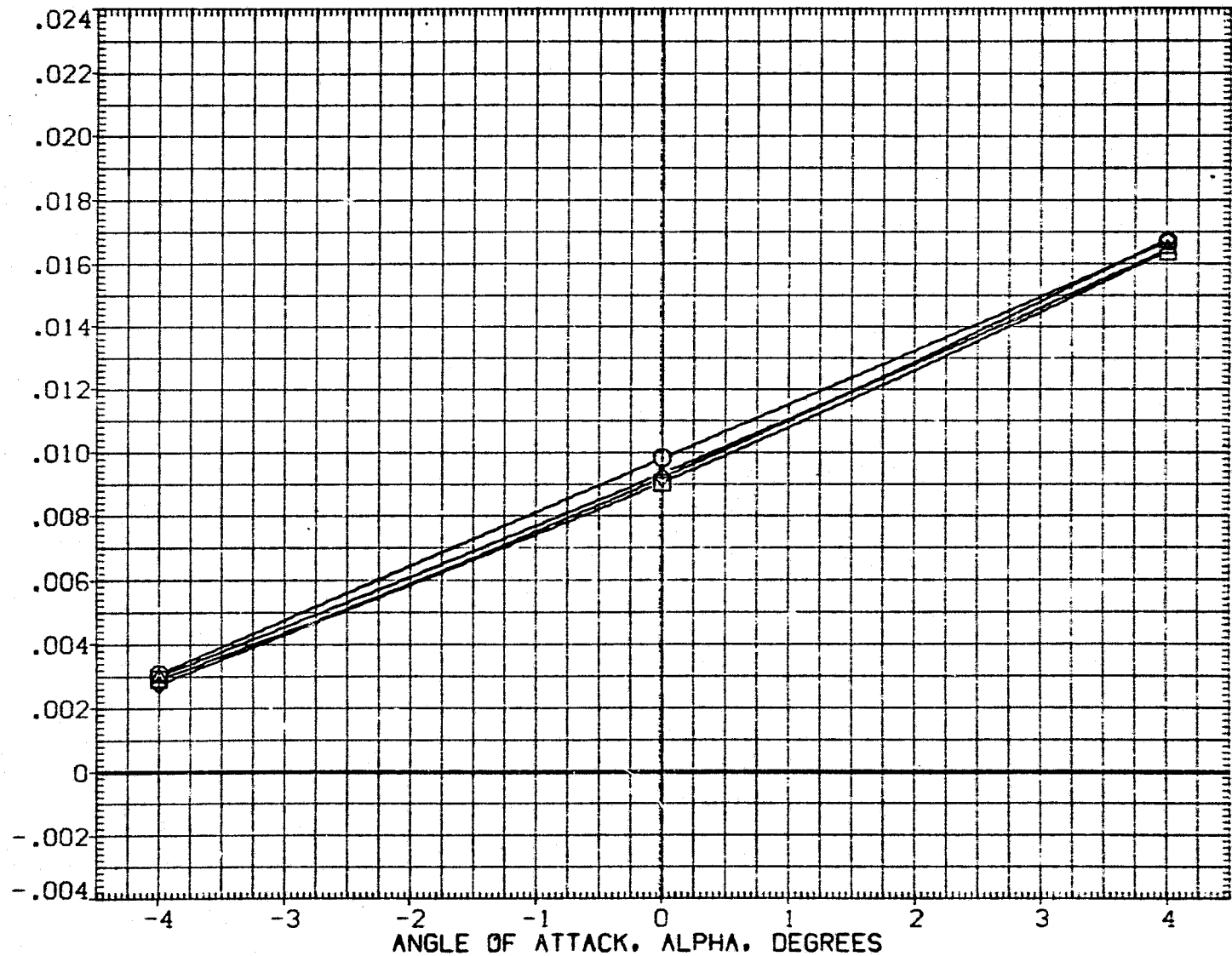


FIG. 54 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4X06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4X01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

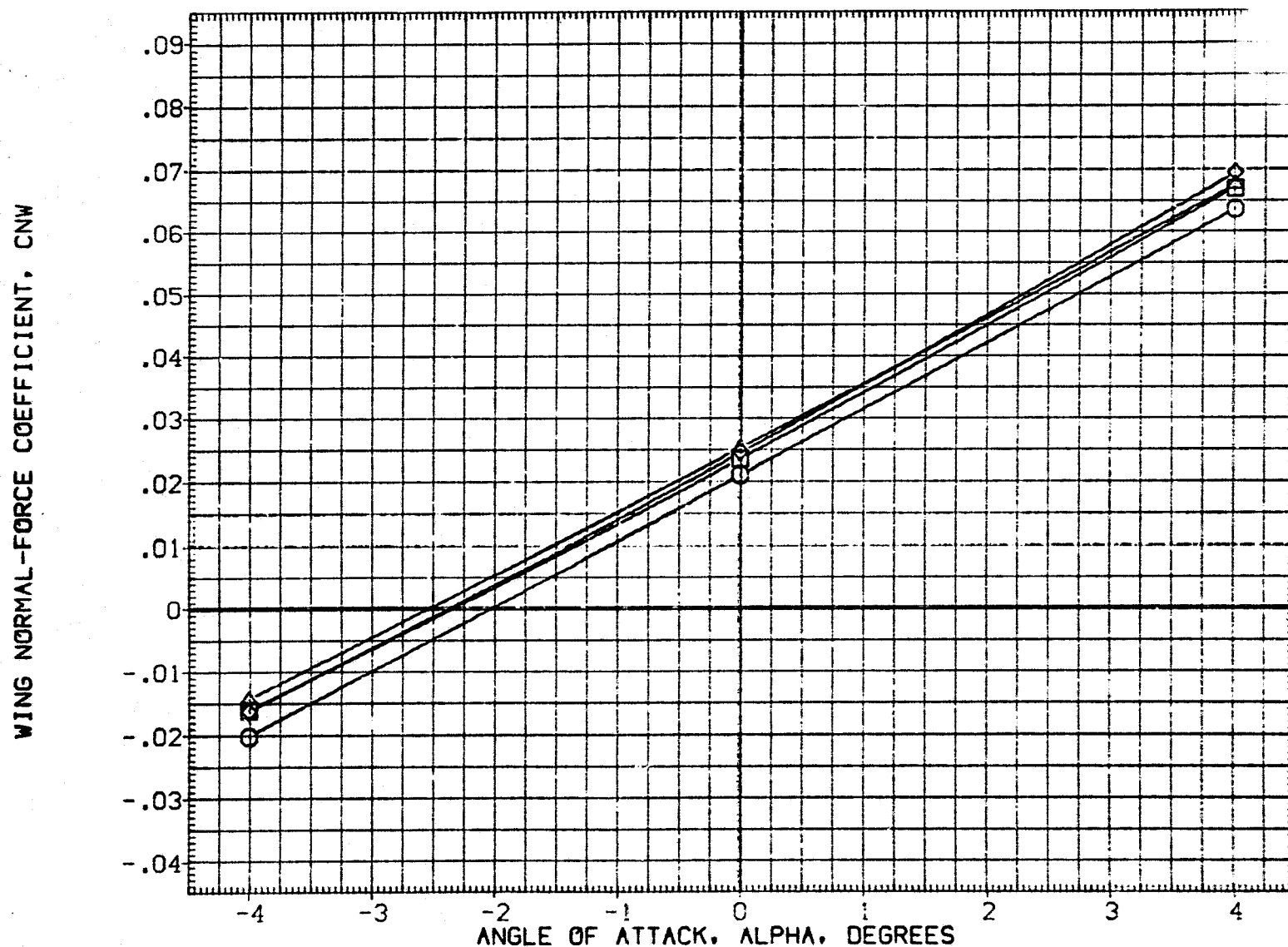


FIG. 54 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF 2690.0000 SQ.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF 1290.3000 IN.
(RE4X07)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.030	.000	.900	4.250	BREF 1290.3000 IN.
(RE4X02)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

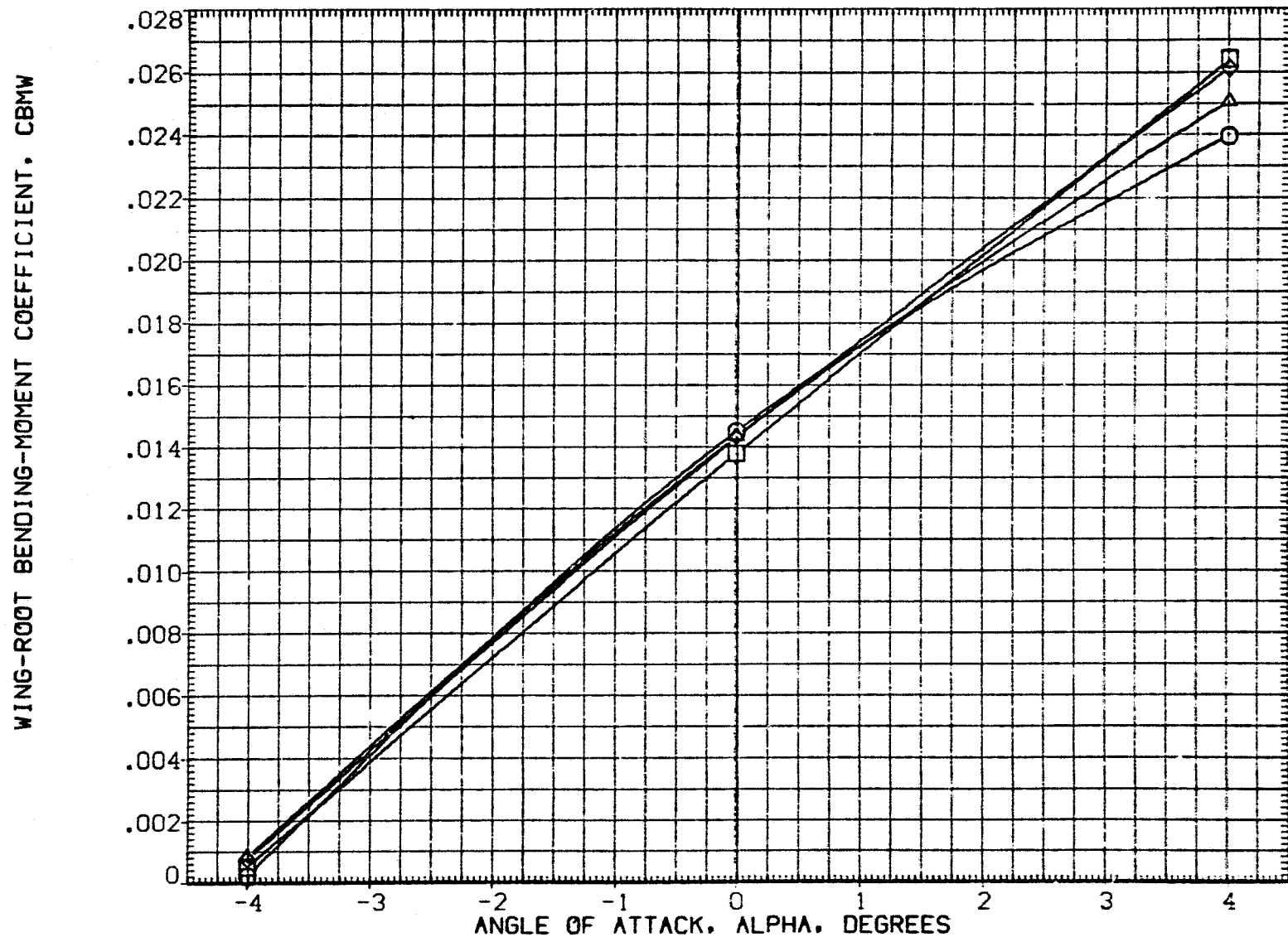


FIG. 55 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000 IN.
(RE4X07)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000 IN.
(RE4X02)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

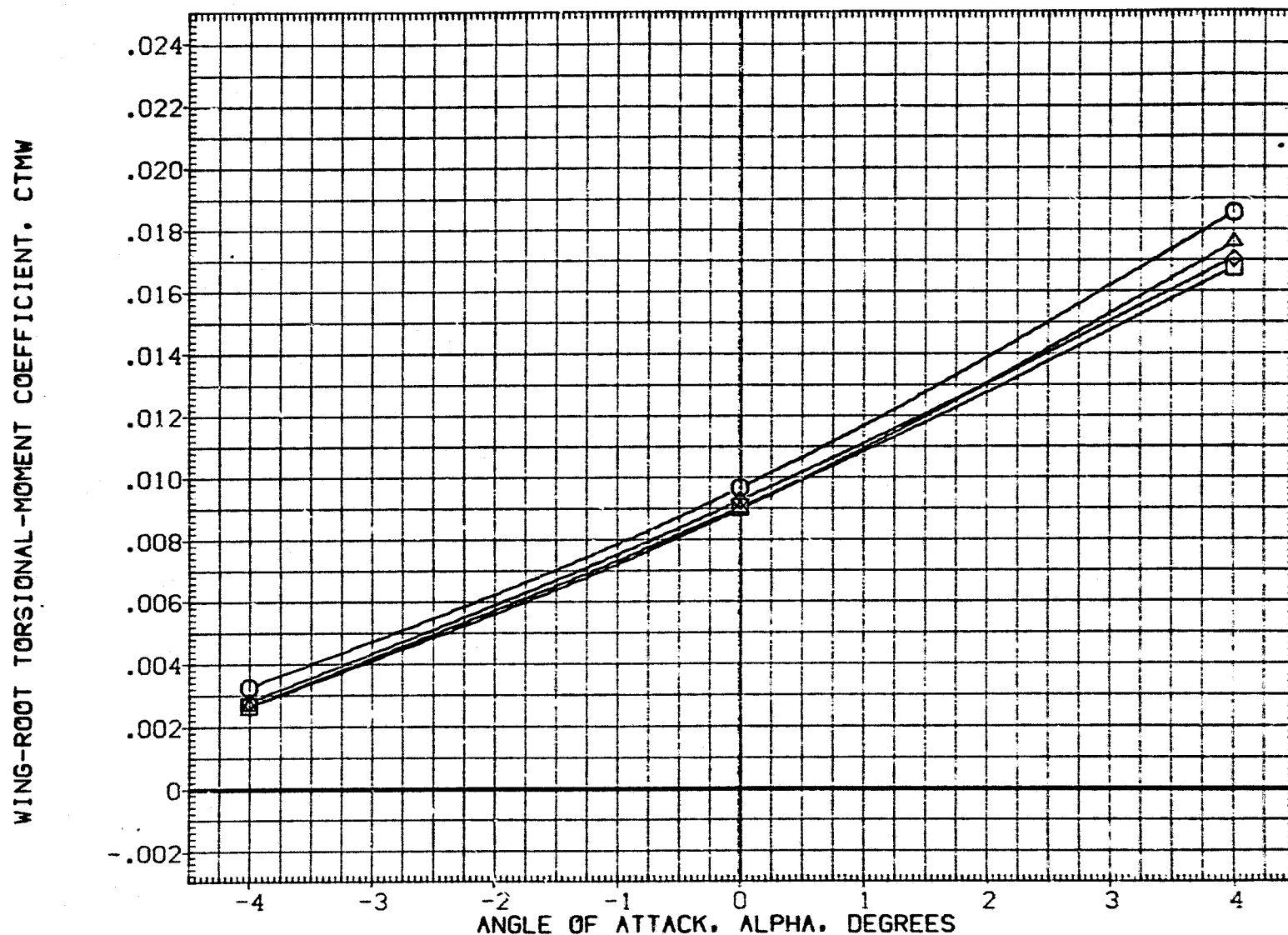


FIG. 55 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4X21)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4X07)	ARC 11-023 1A80 0TS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4X02)	ARC 11-023 1A80 0TS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

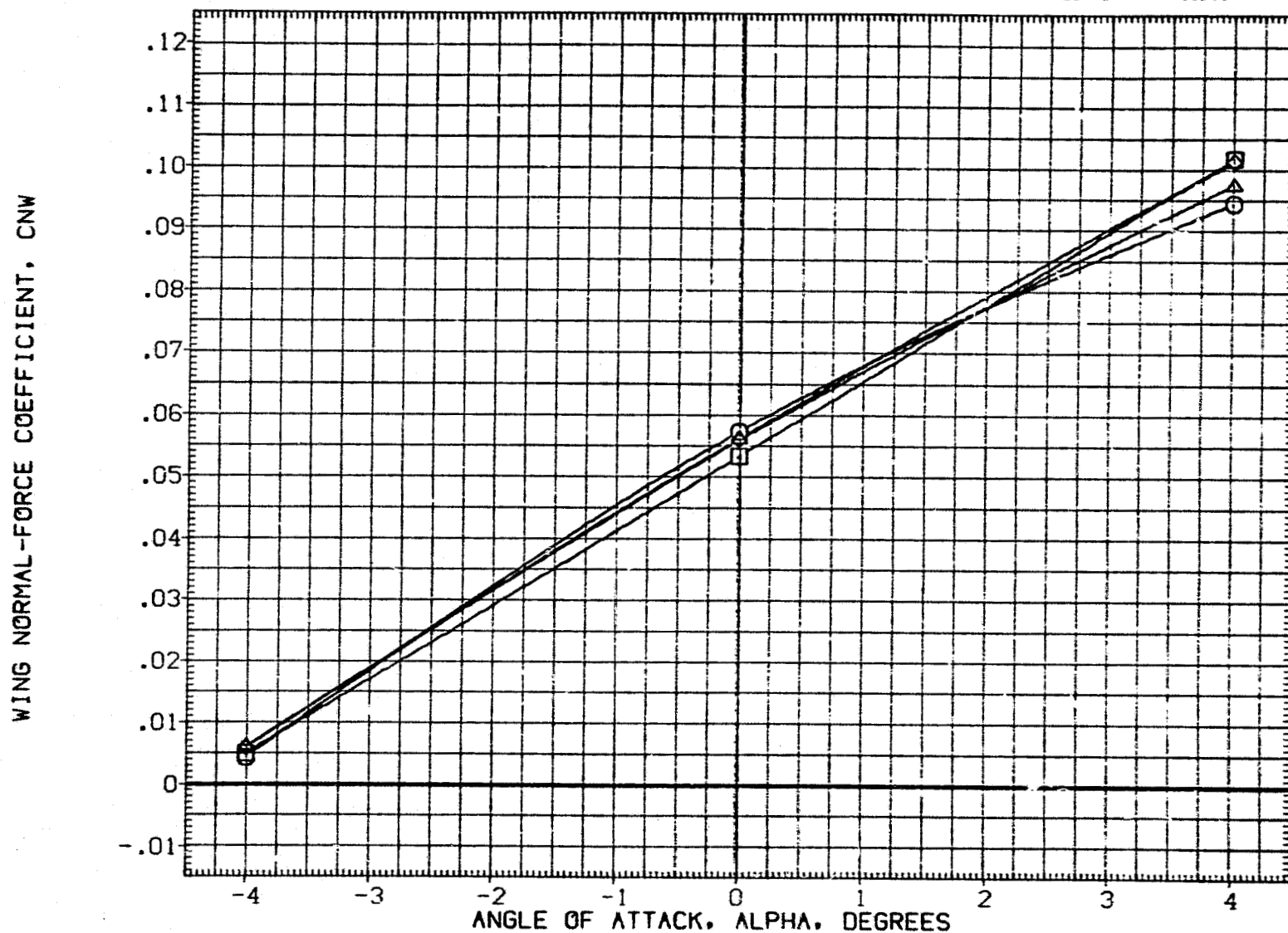


FIG. 55 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 IAB0 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SO.FT.
(RE4X22)	ARC 11-023 IAB0 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X25)	ARC 11-023 IAB0 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X08)	ARC 11-023 IAB0 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4X03)	ARC 11-023 IAB0 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

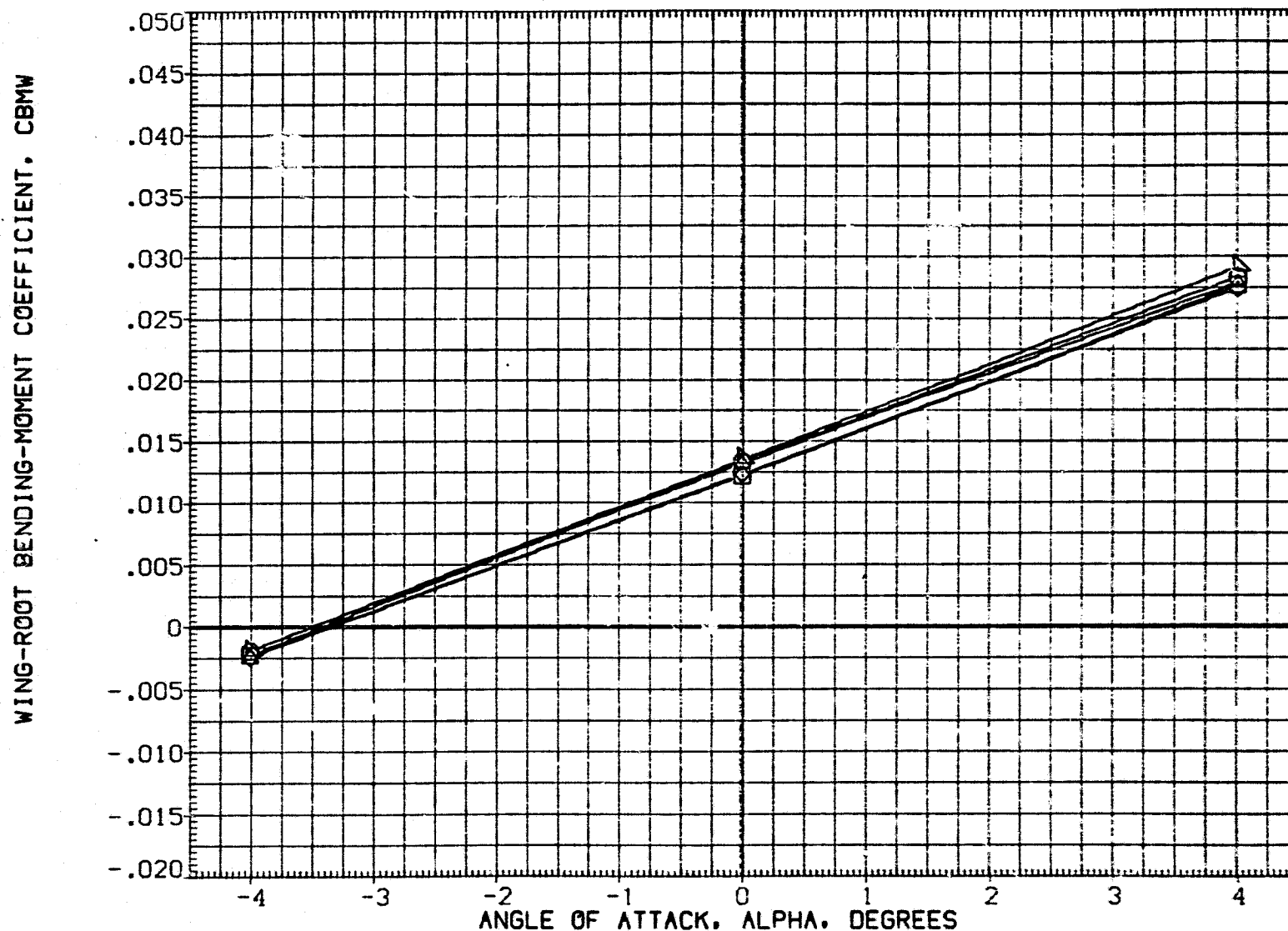


FIG. 56 EFFECT OF PLOUES ON WING LOADS IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4X03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW



FIG. 56 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.1
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-13	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4X03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

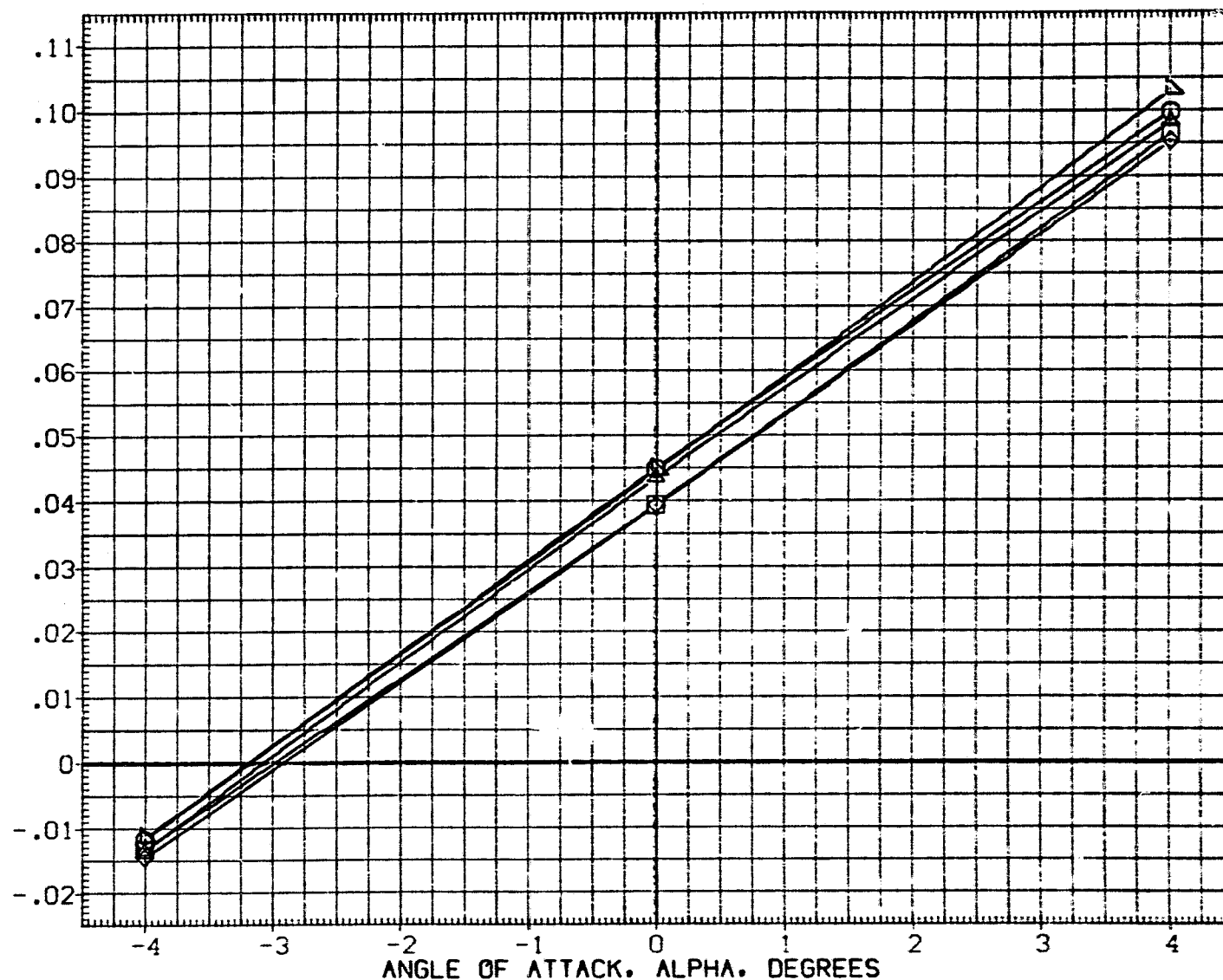


FIG. 56 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4X23)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X26)	ARC 11-023 1A60 0TS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X09)	ARC 11-023 1A80 0TS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4X04)	ARC 11-023 1A80 0TS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

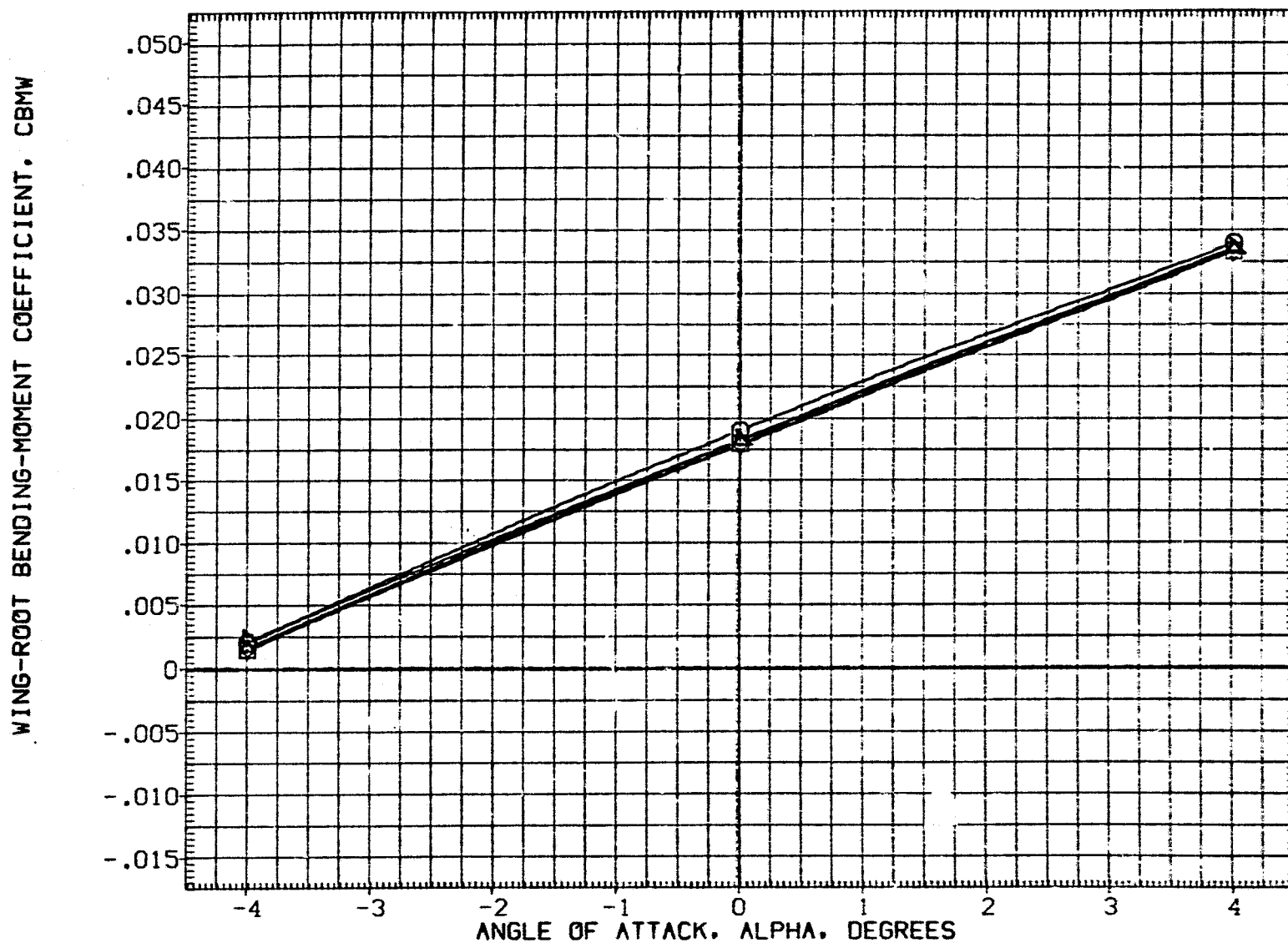


FIG. 57 EFFECT OF PLOUMES ON WING LOADS IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X23)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X26)	ARC 11-023 1A80 0TS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4X09)	ARC 11-023 1A80 0TS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4X04)	ARC 11-023 1A80 0TS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

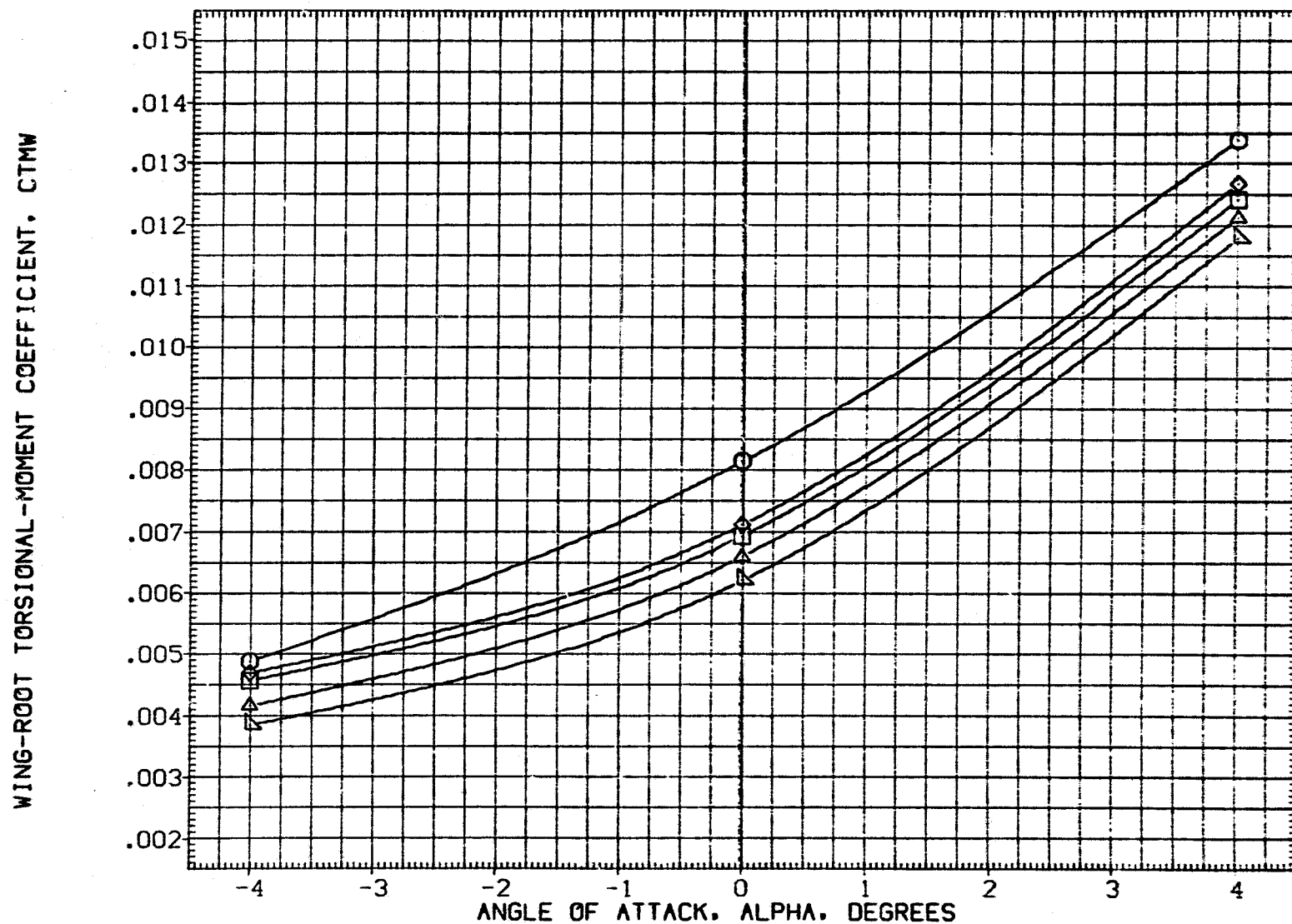


FIG. 57 EFFECT OF PLEUMS ON WING LOADS IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4X04)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

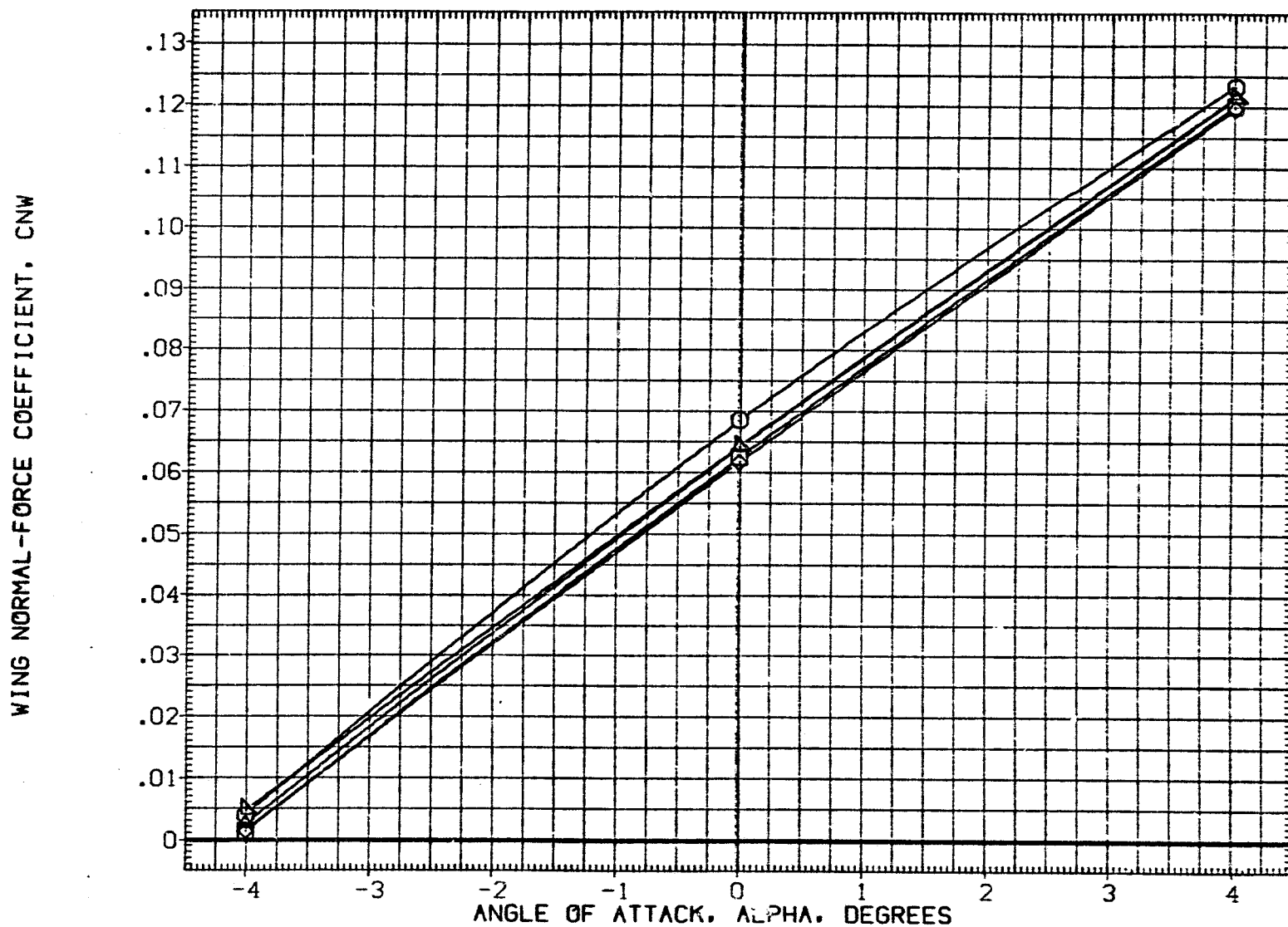


FIG. 57 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4X05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

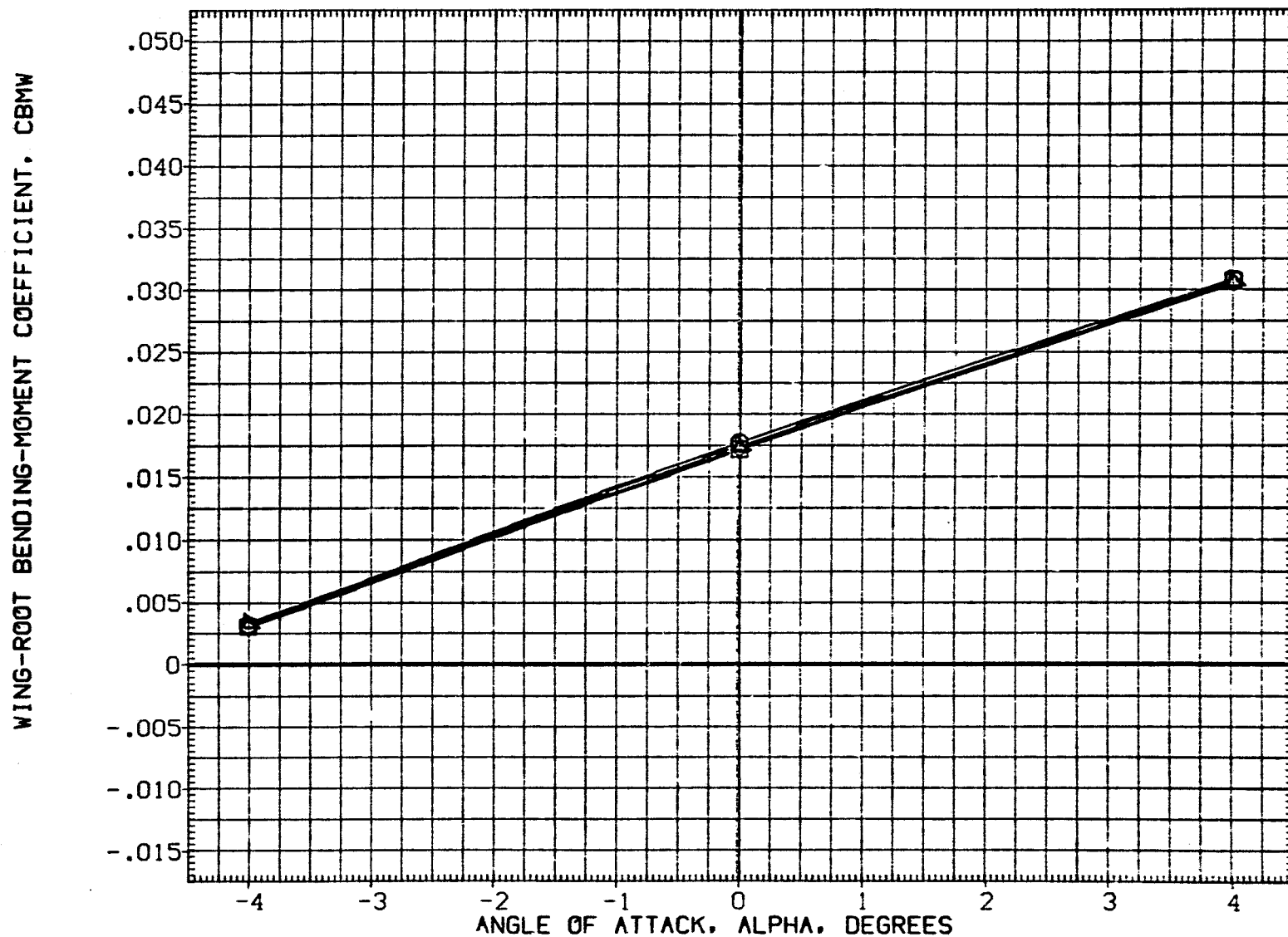


FIG. 58 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RM/L	REFERENCE INFORMATION
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF 1290.3000 IN.
(RE4X27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF 1290.3000 IN.
(RE4X10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP .0000 IN.
(RE4X05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

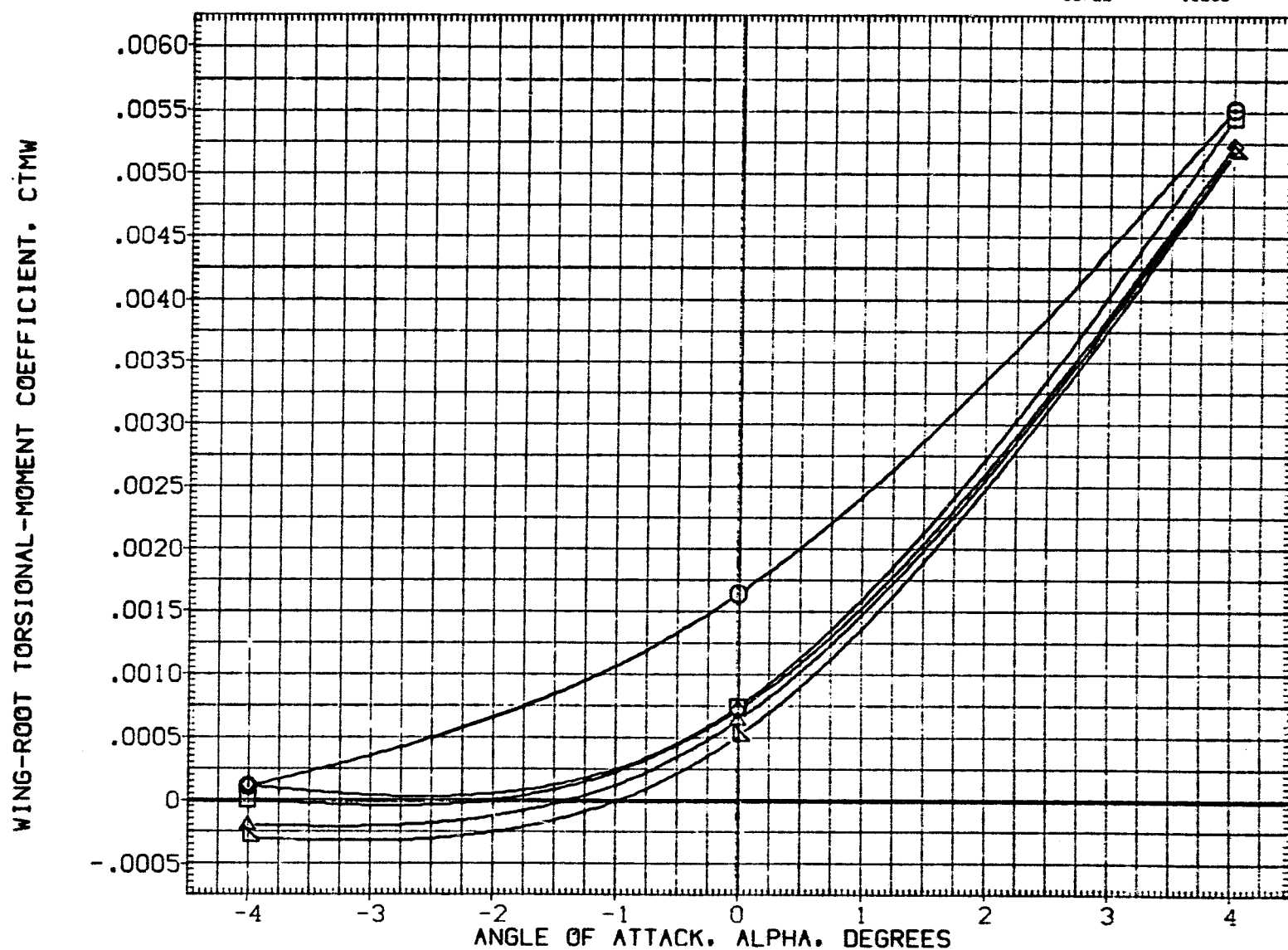


FIG. 58 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X32)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4X24)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF 1290.3000 IN.
(RE4X27)	△	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF 1290.3000 IN.
(RE4X10)	◇	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP .0000 IN.
(RE4X05)	△	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP .0000 IN.
							ZMRP .0000 IN.
							SCALE .0200

WING NORMAL-FORCE COEFFICIENT, CNW

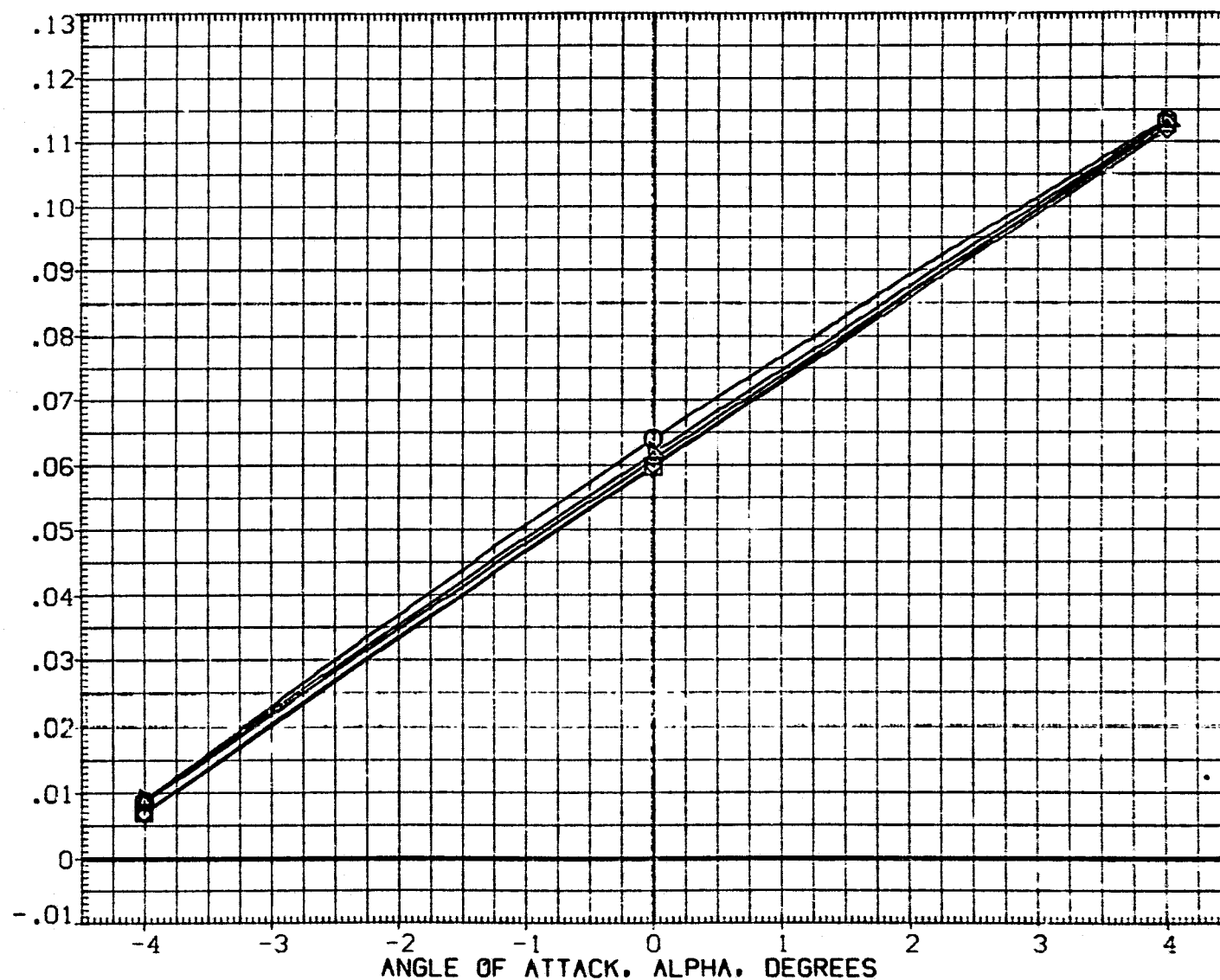


FIG. 58 EFFECT OF PLUMES ON WING LOADS IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4X06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4X01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	IN.

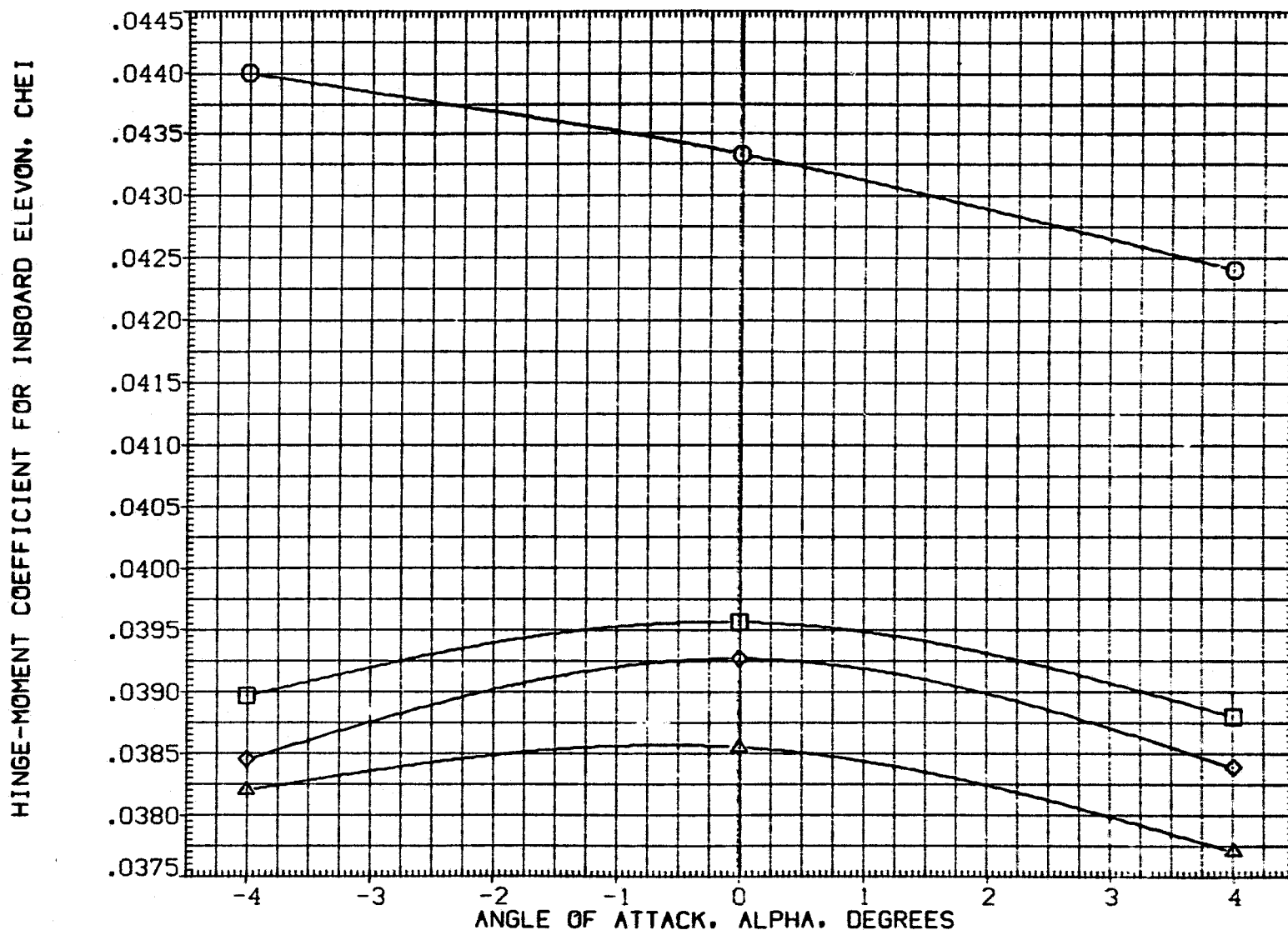


FIG. 59 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4X06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4X01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

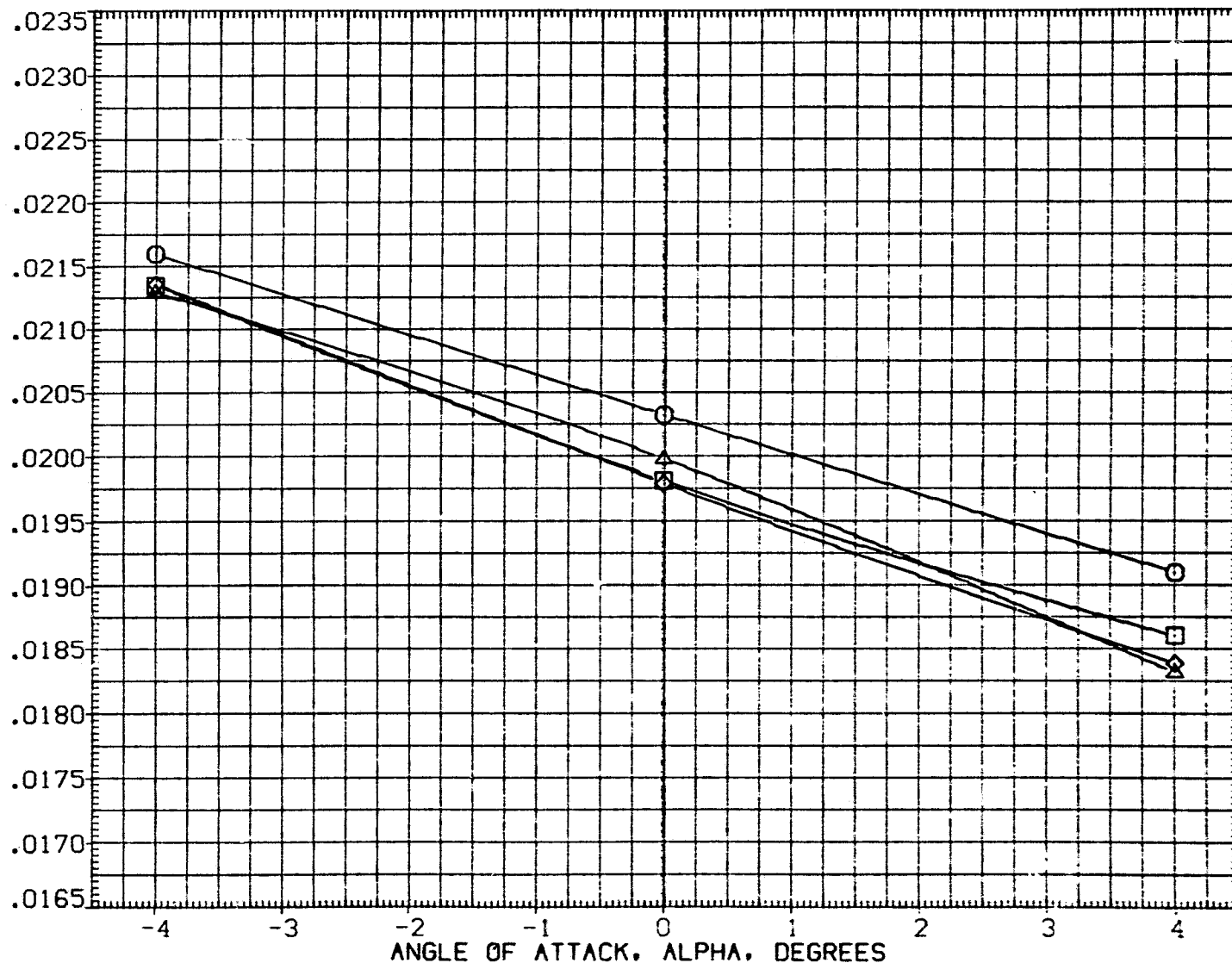


FIG. 59 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X29)	○	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF 2690.0000 SQ.FT.
(RE4X21)	□	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF 1290.3000 IN.
(RE4X07)	◇	ARC 11-023 1A80 0TS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF 1290.3000 IN.
(RE4X02)	△	ARC 11-023 1A80 0TS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRF .0000 IN.
							YMRF .0000 IN.
							ZMRF .0000 IN.
							SCALE .0200

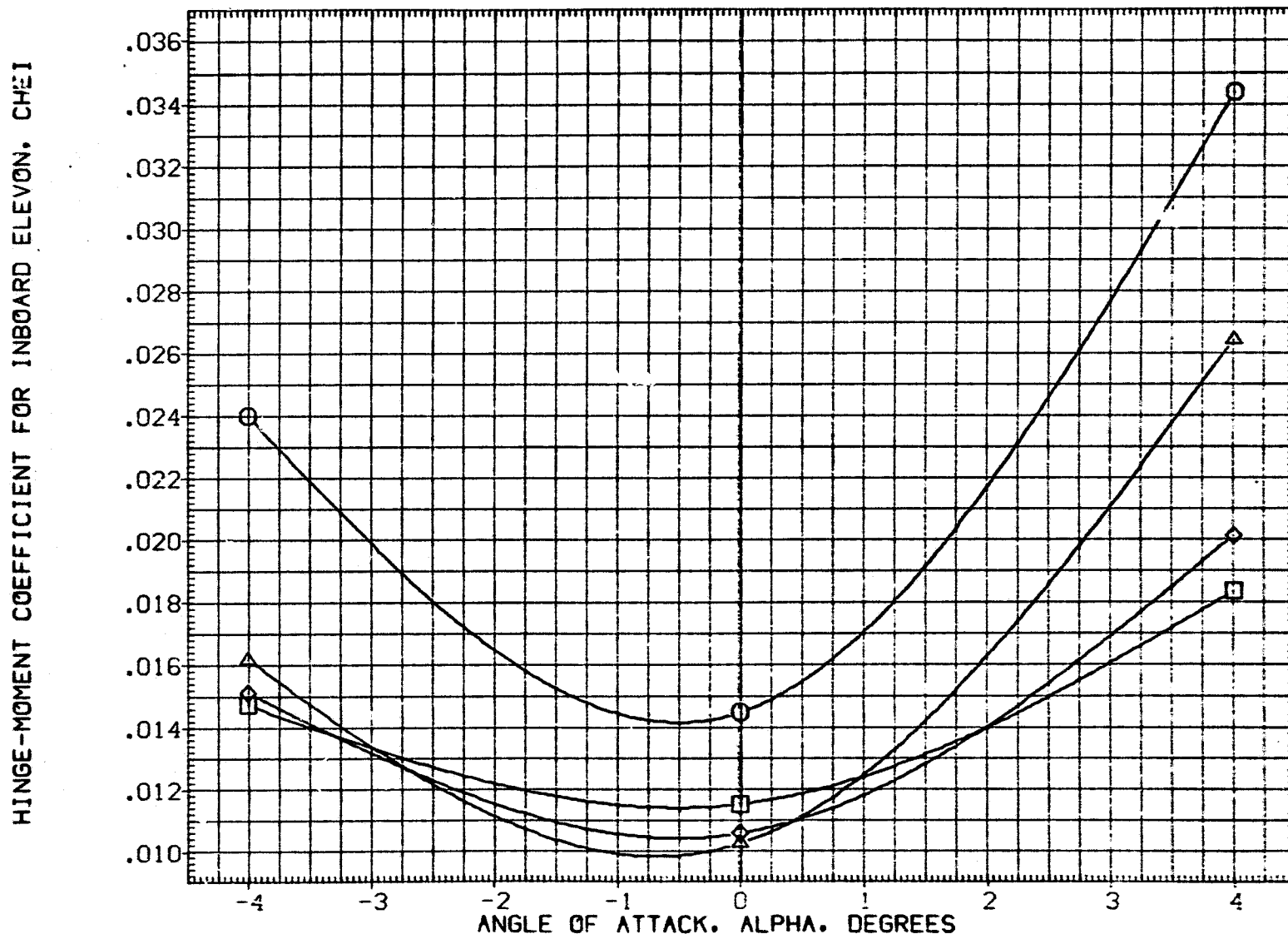


FIG. 60 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000 IN.
(RE4X07)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000 IN.
(RE4X02)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

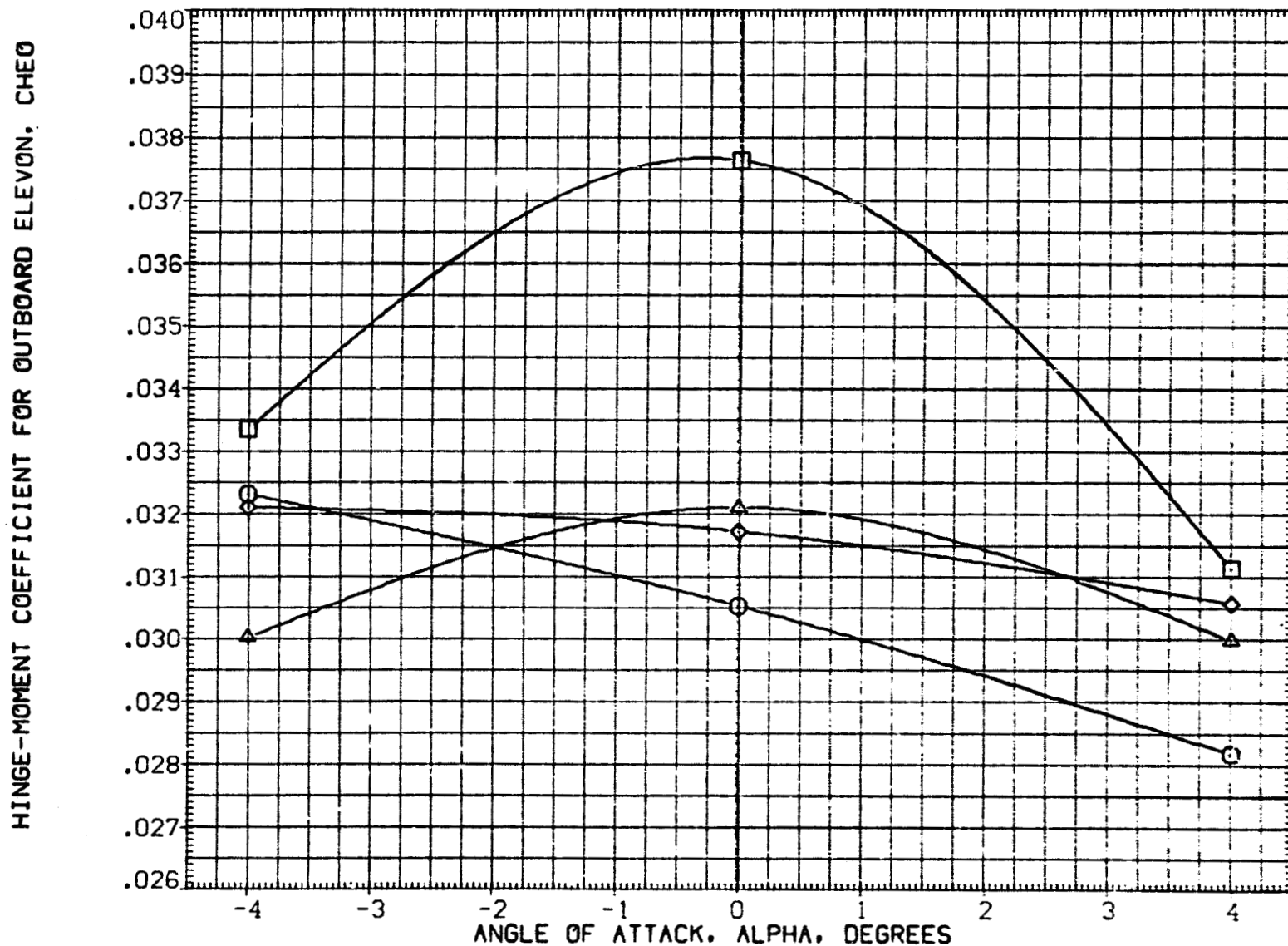


FIG. 60 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=0.9
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-09	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4X03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

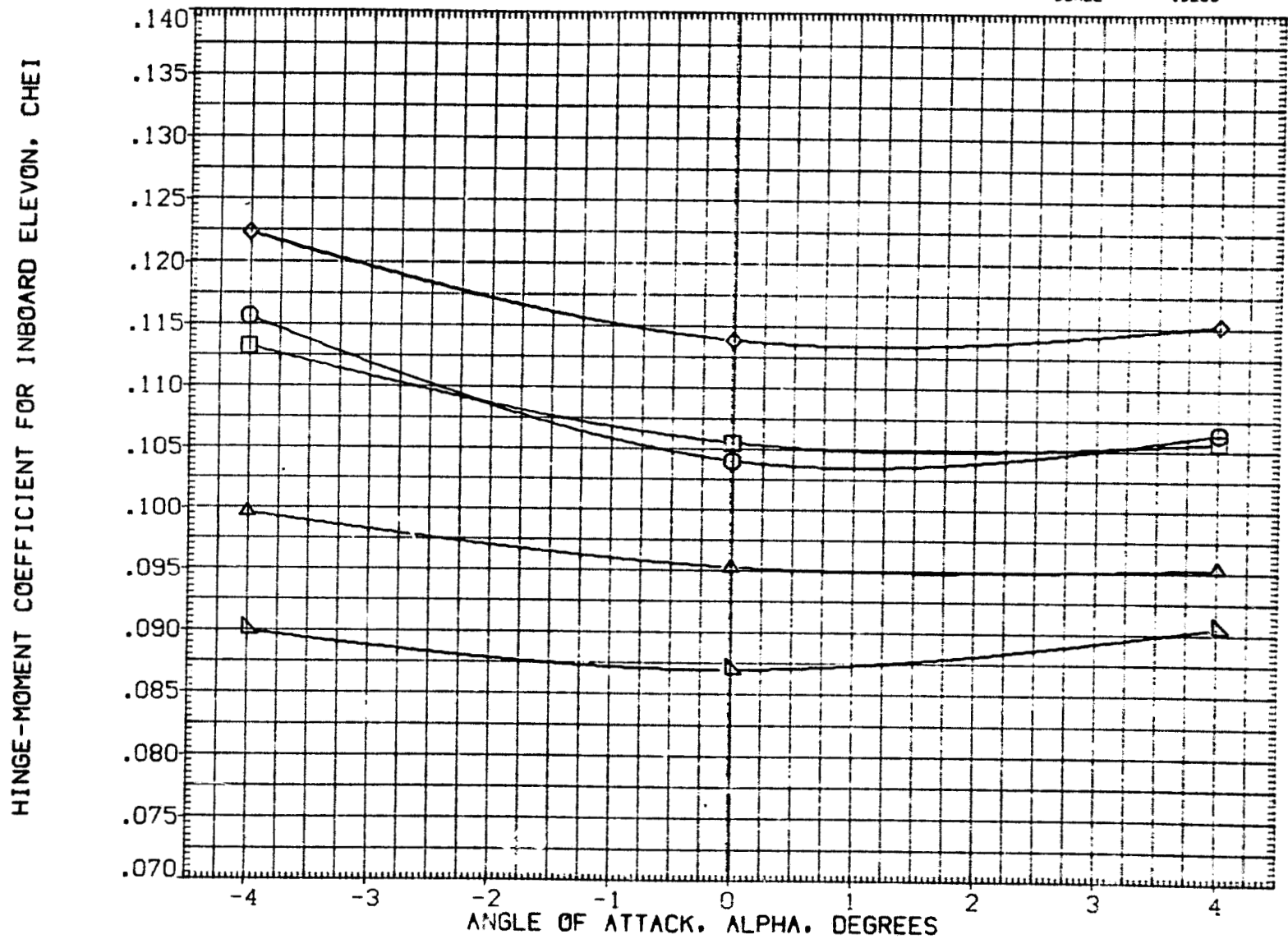


FIG. 61 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-ID	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4X03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

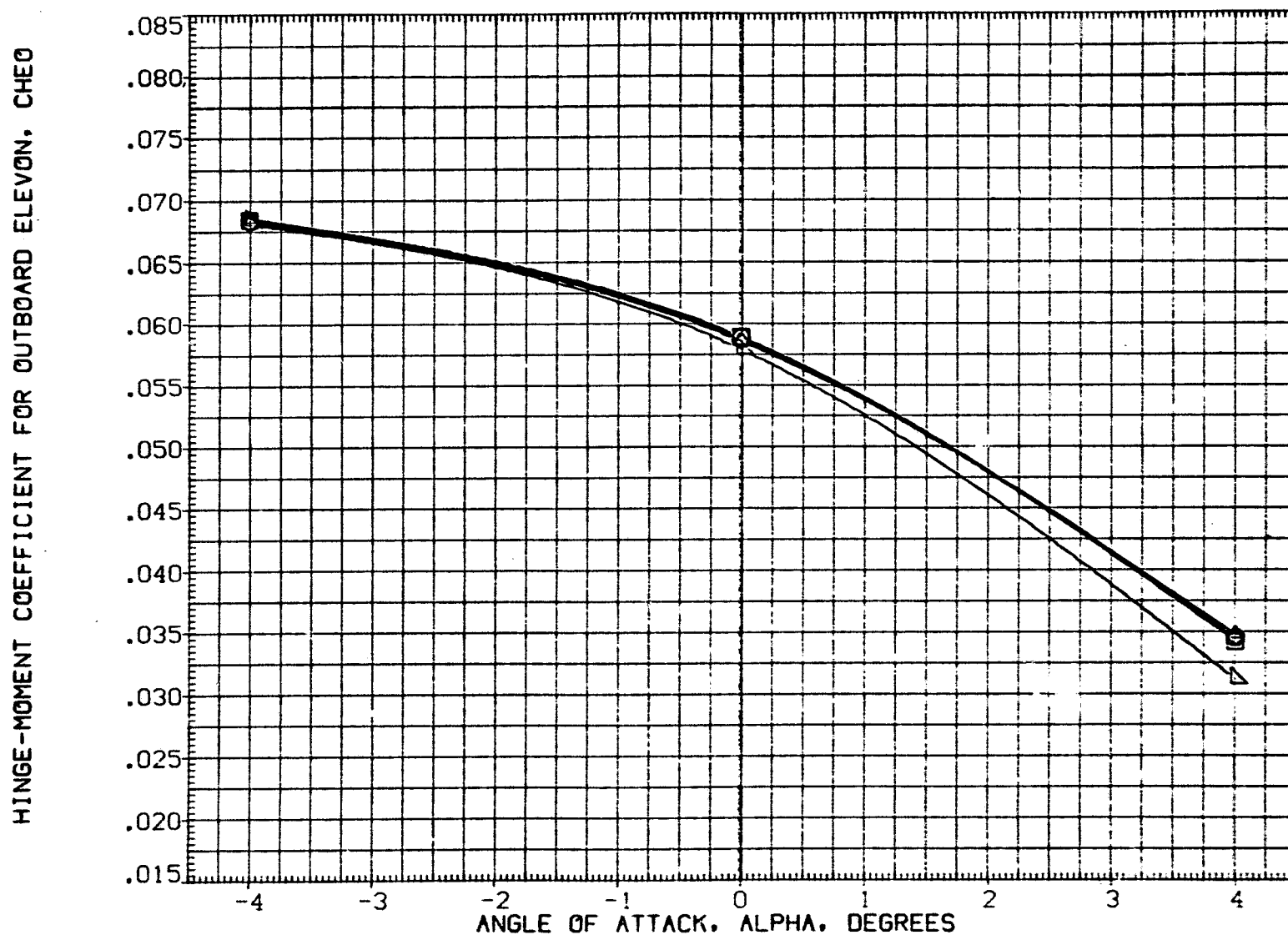


FIG. 61 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4X04)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

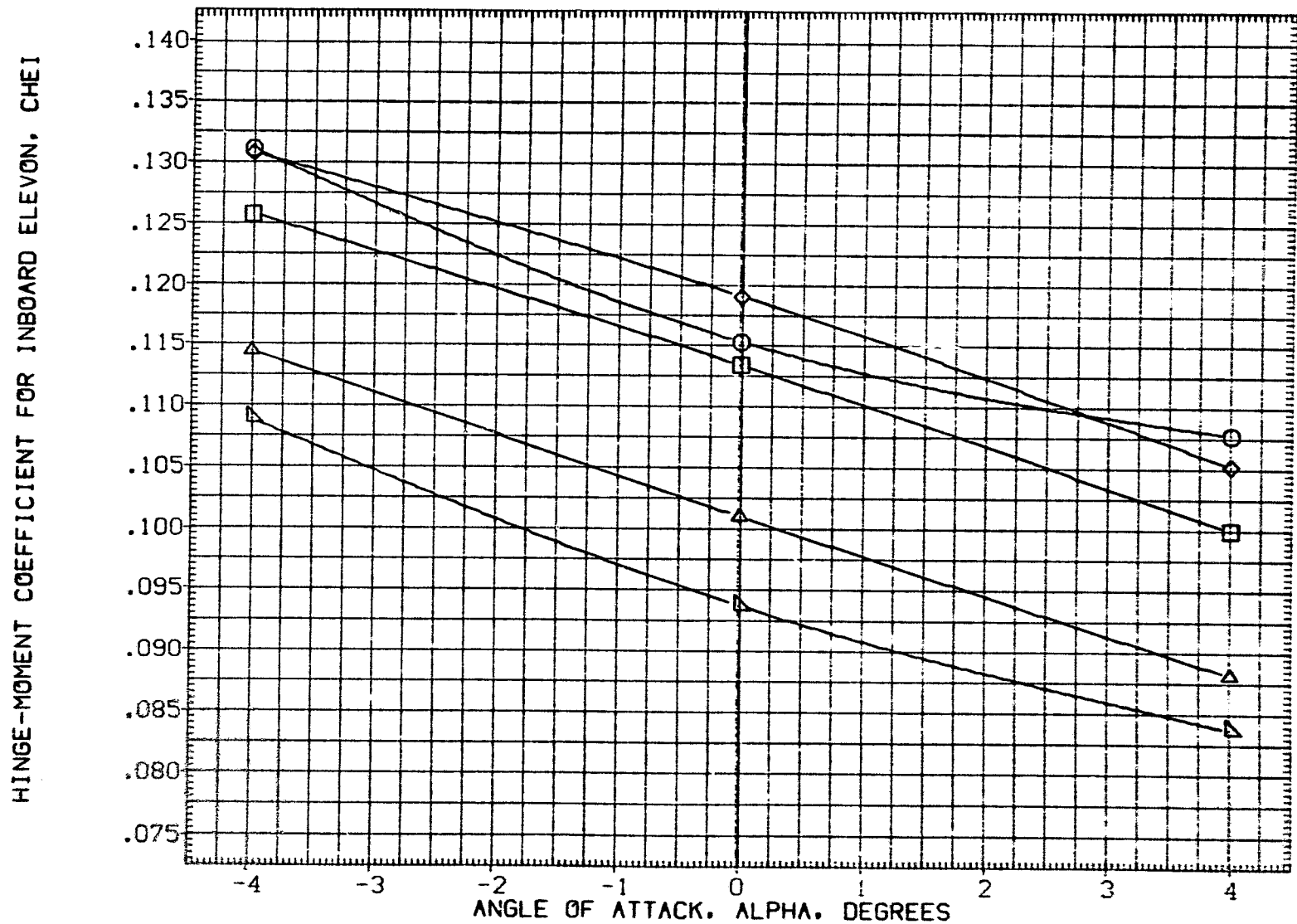


FIG. 62 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X23)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X26)	◇	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4X09)	△	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4X04)	△	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000 IN.
							ZMRP	.0000 IN.
							SCALE	.0200

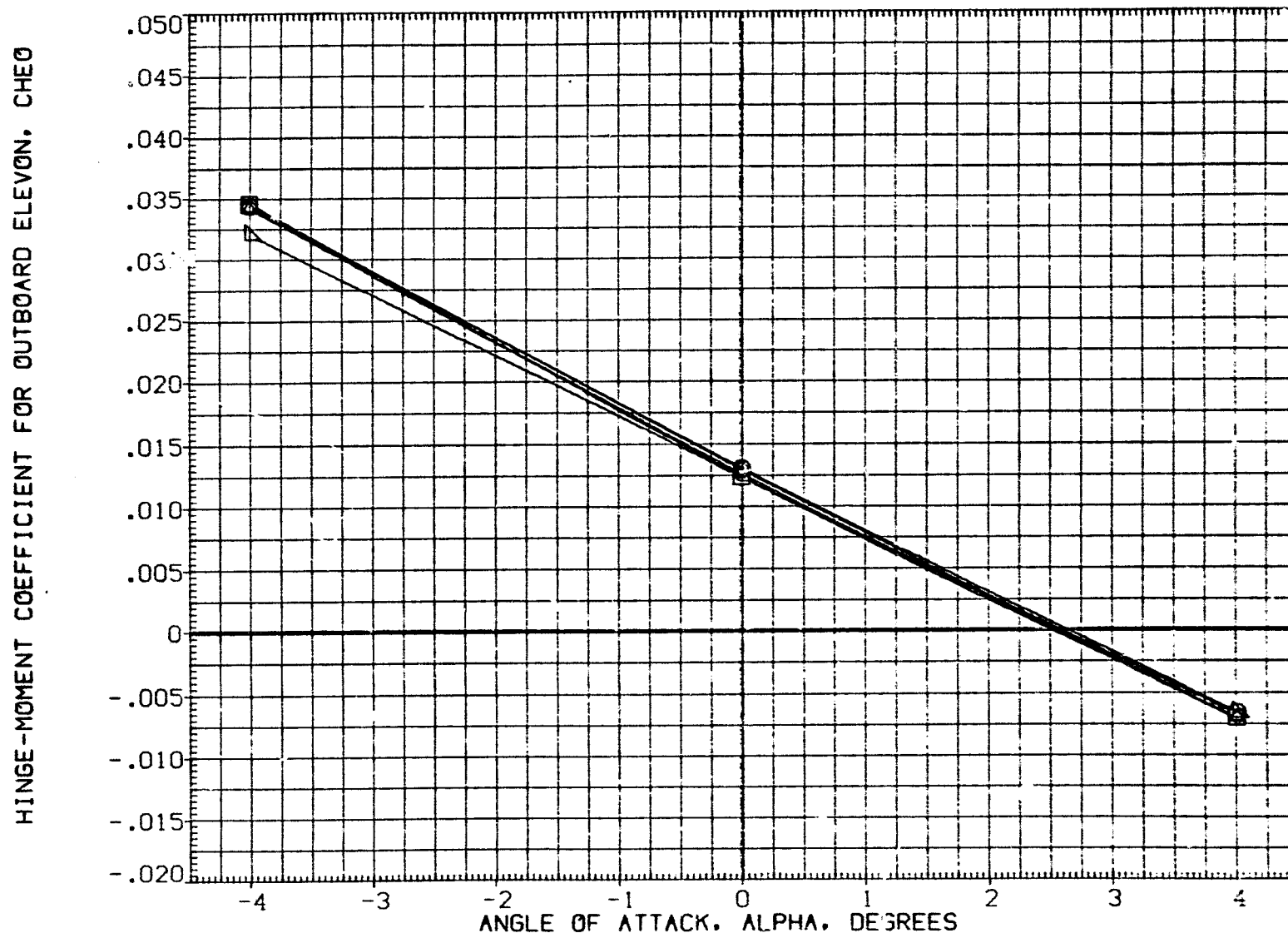


FIG. 62 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4X05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

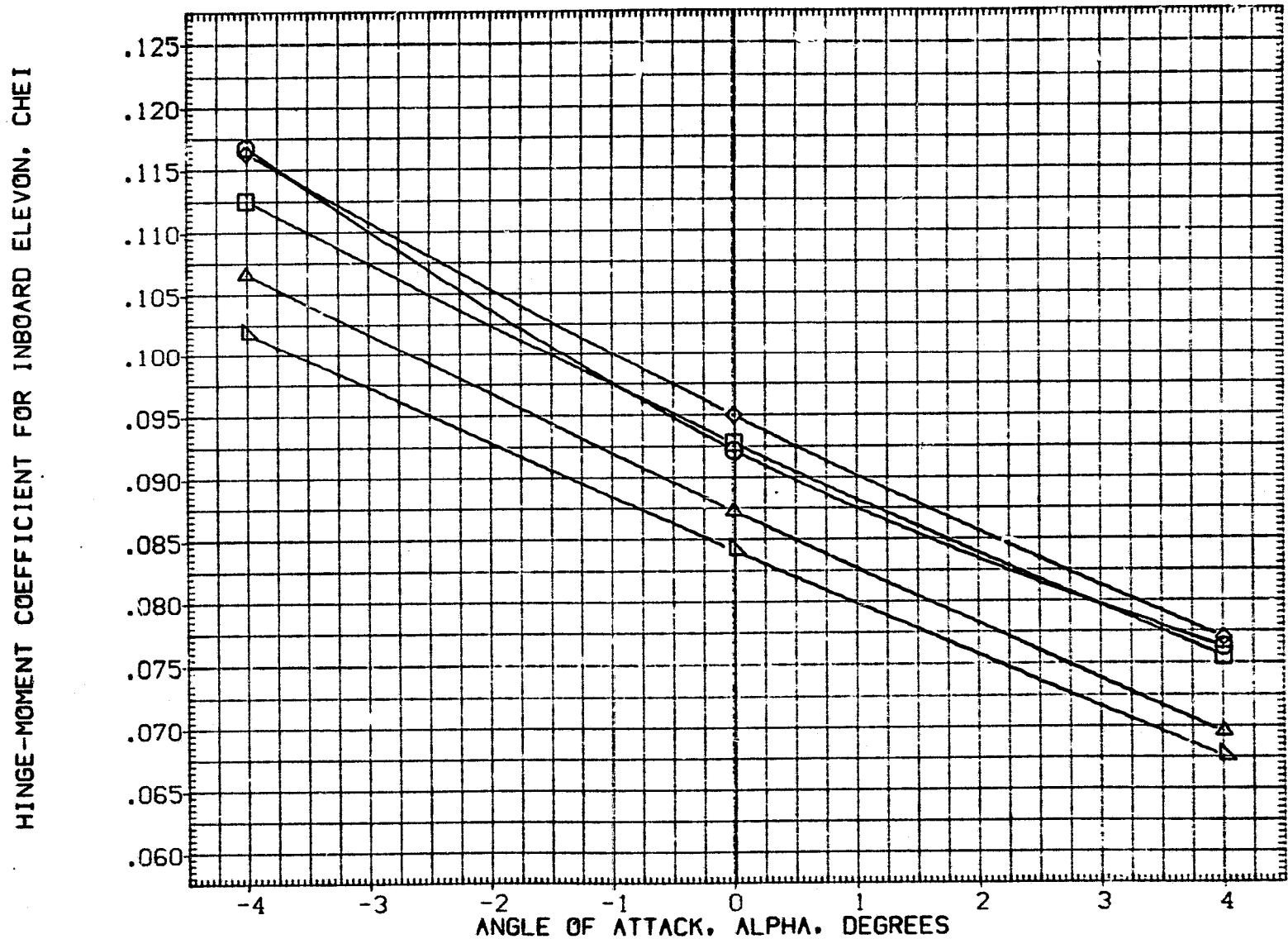


FIG. 63 EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4X05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

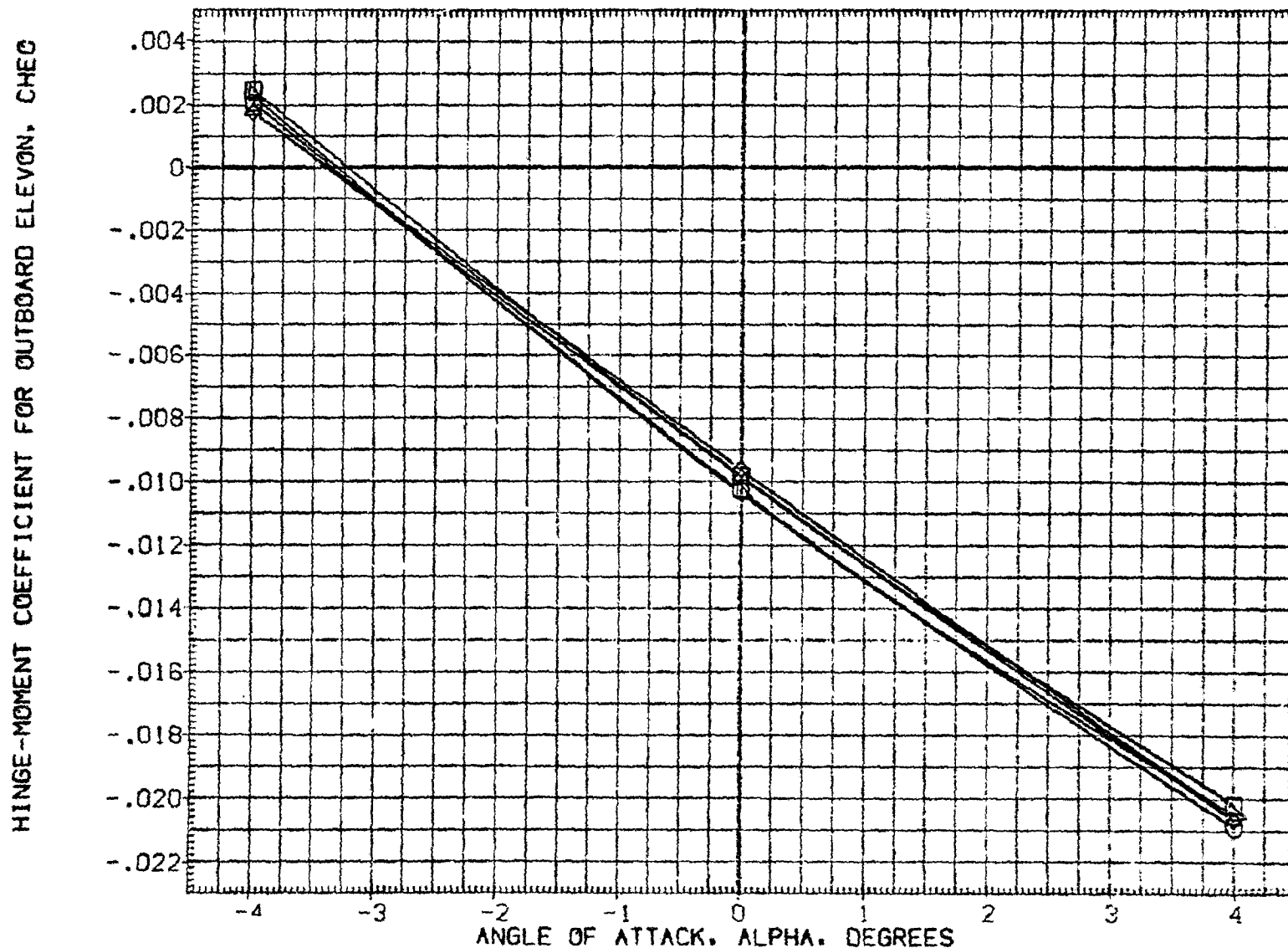


FIG.63A EFFECT OF PLUMES ON ELEVON HINGE MOMENTS IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y20) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y06) △	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y01) ×	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

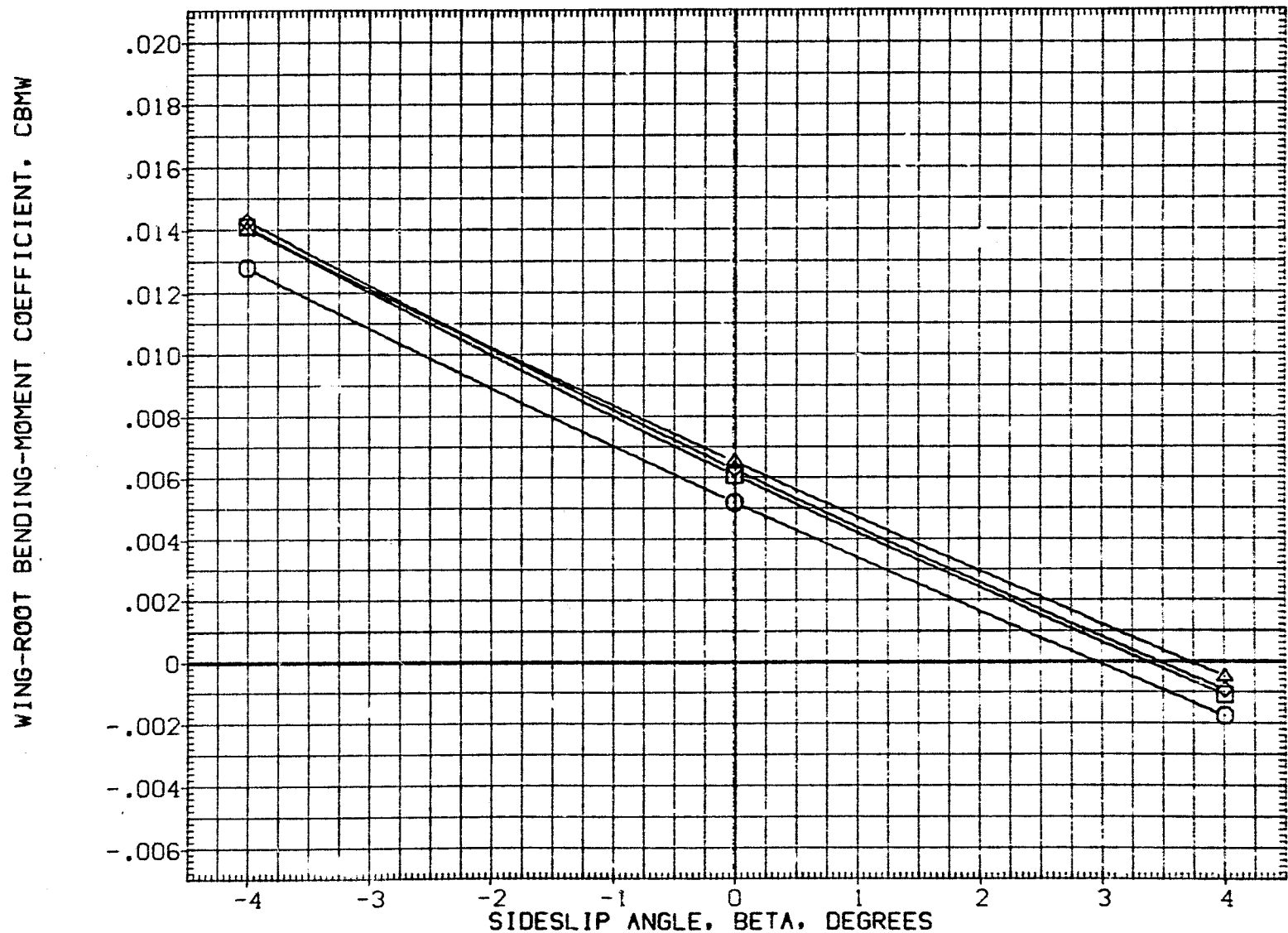


FIG. 64 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

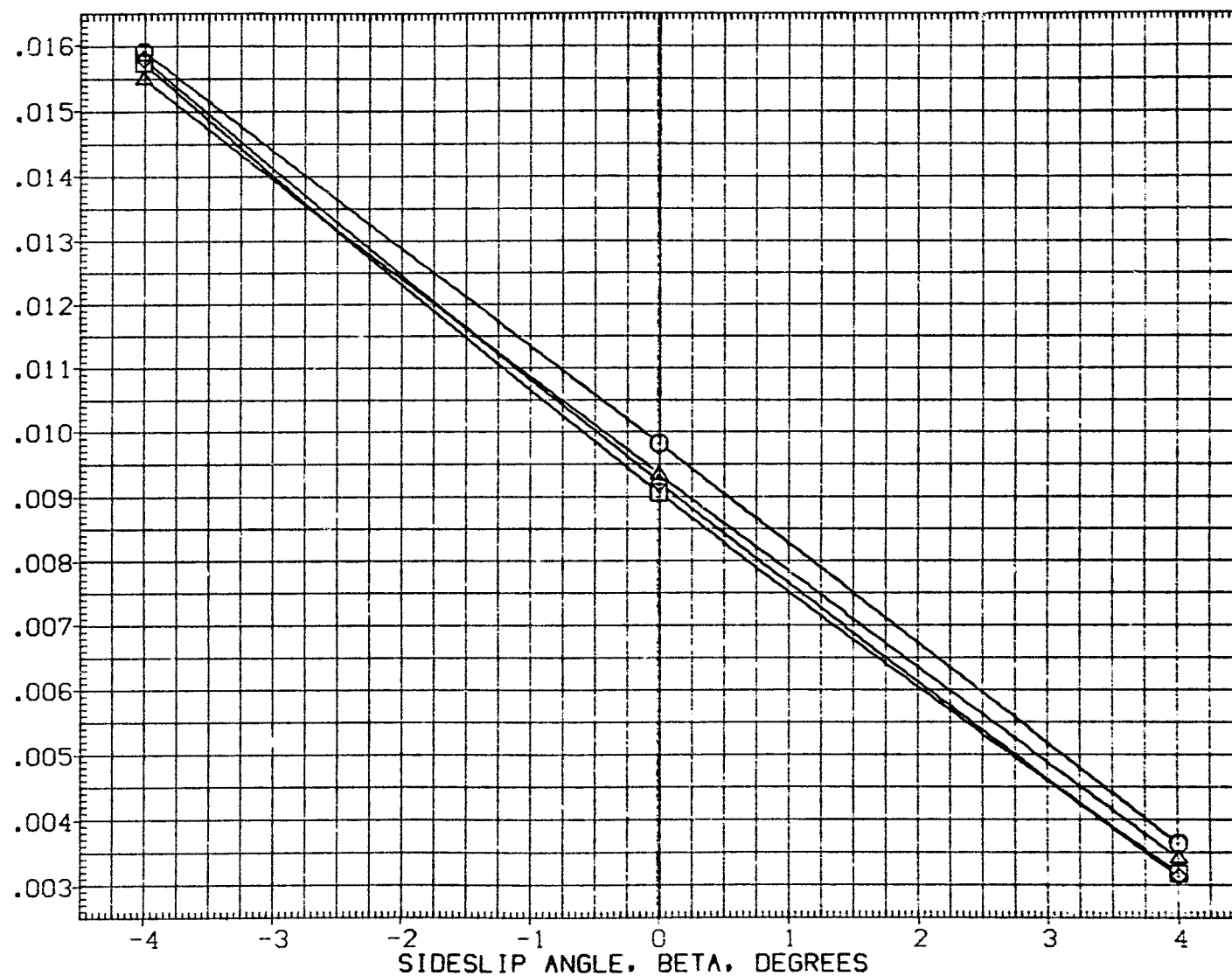


FIG. 64 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-CB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

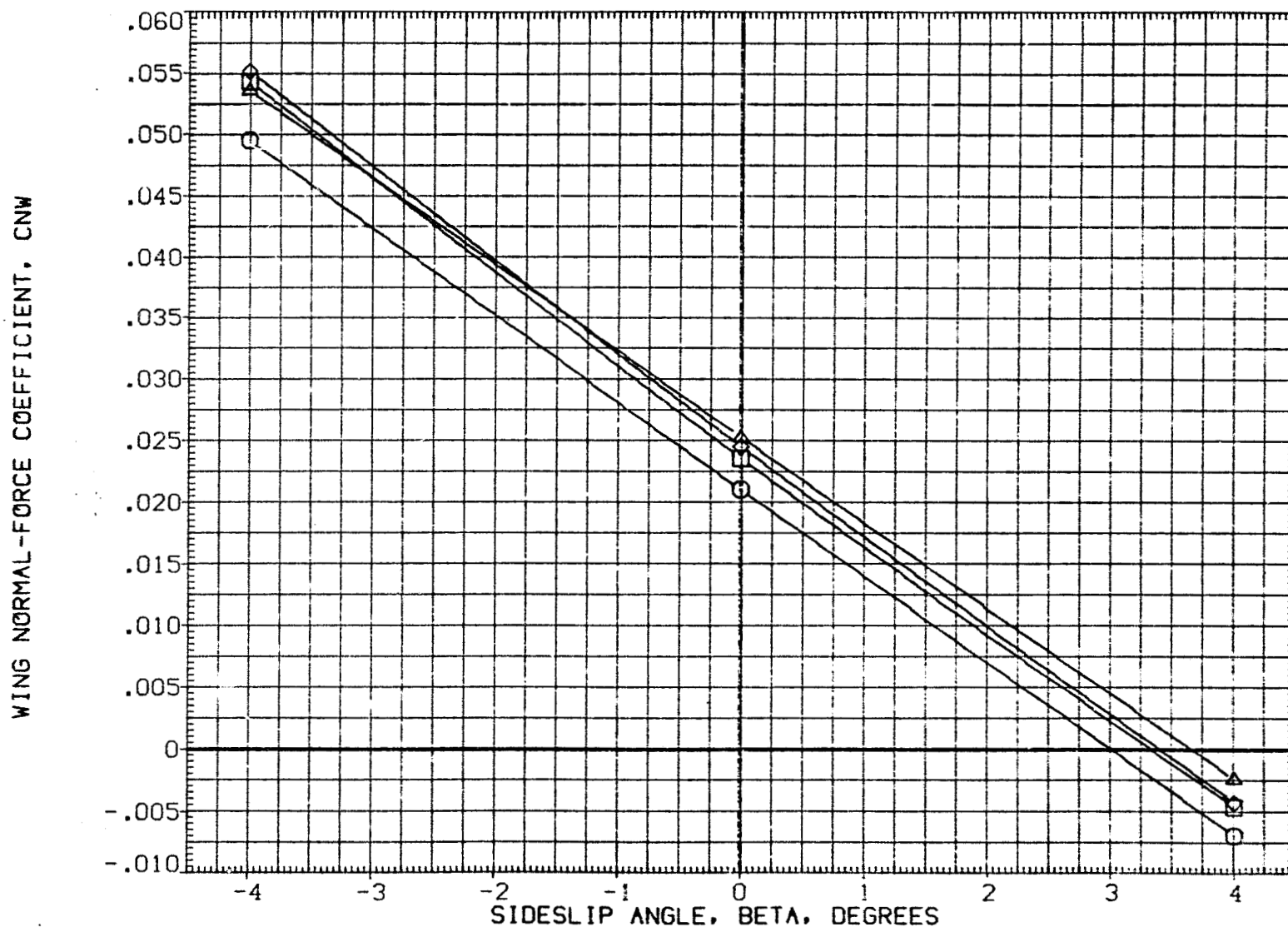


FIG. 64 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y07)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y02)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

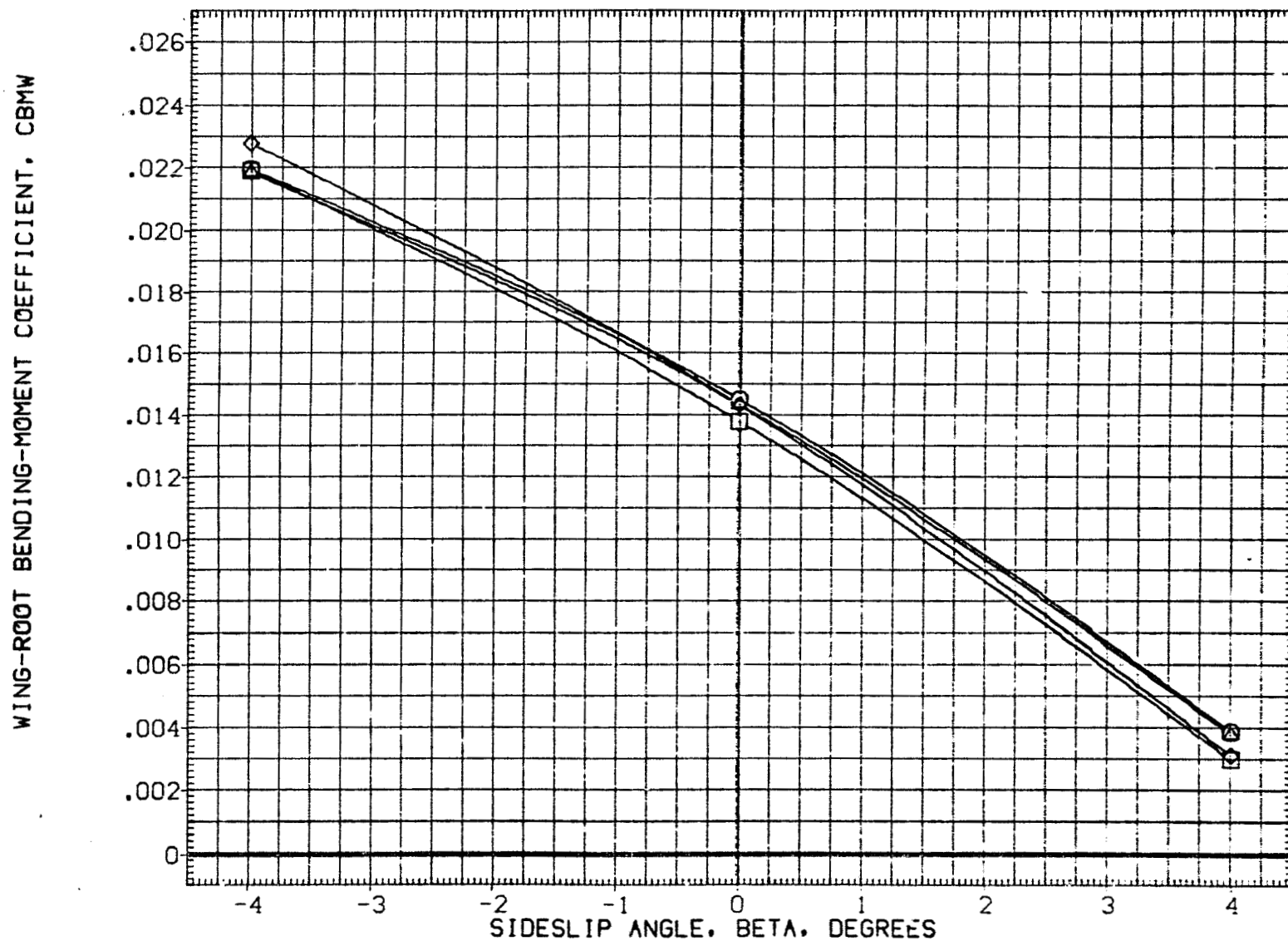


FIG. 65 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50. FT.
(RE4Y21)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y07)	ARC 11-023 1A80 0TS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y02)	ARC 11-023 1A80 0TS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

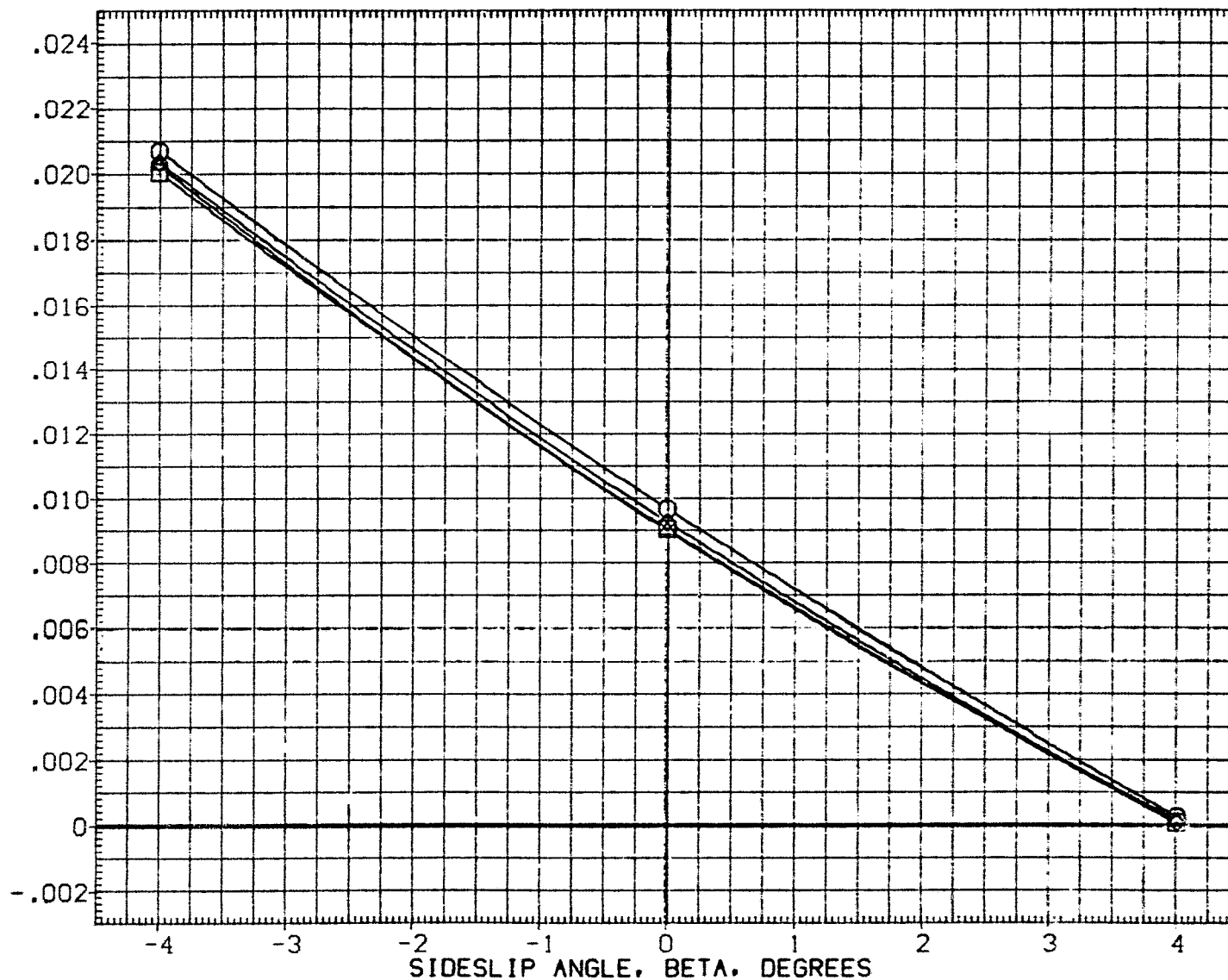


FIG. 65 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y07)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y02)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XM RP	.0000 IN.
						YM RP	.0000 IN.
						ZM RP	.0000 IN.
						SCALE	.0200

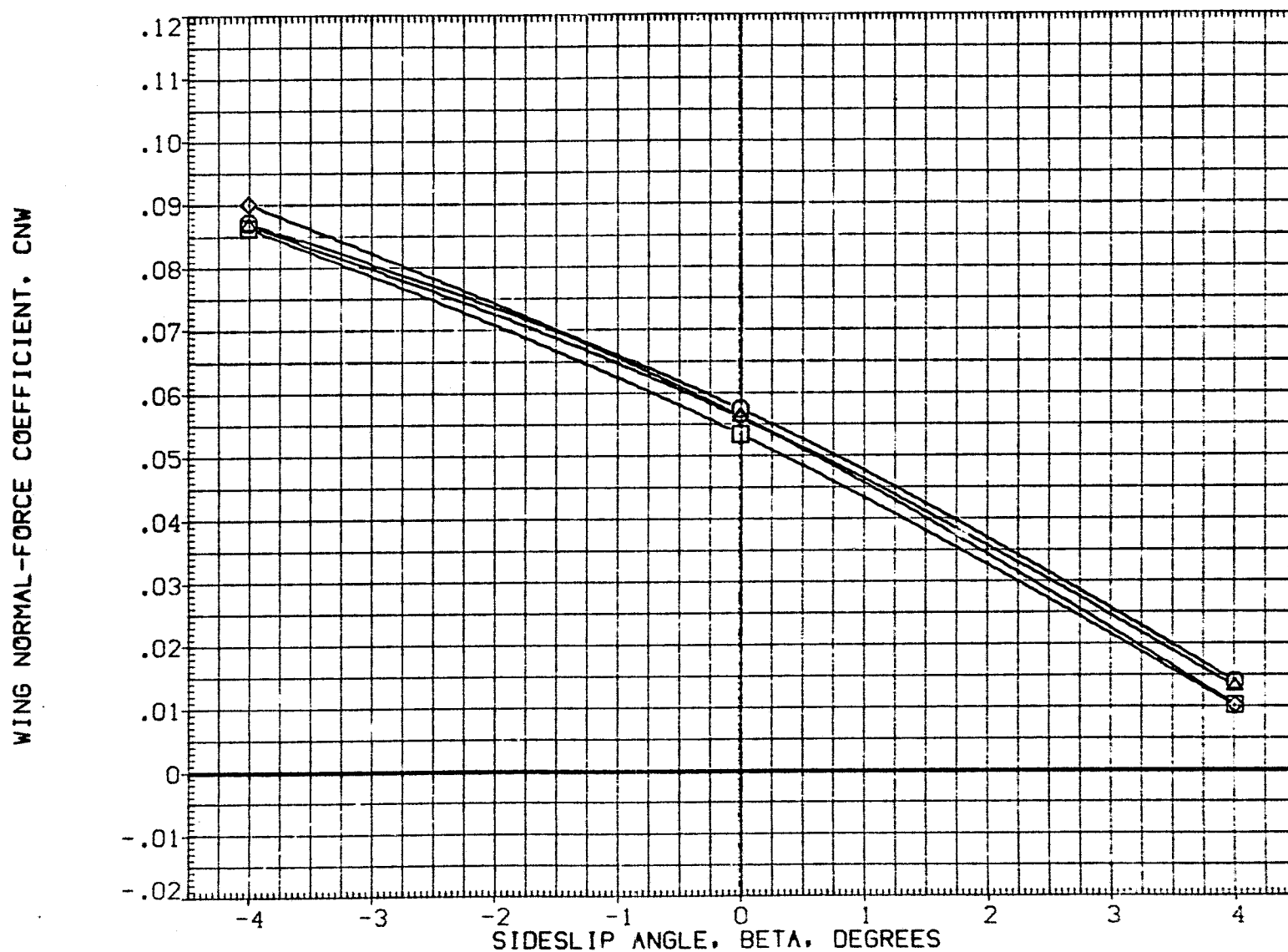


FIG. 65 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=0.9
(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y22)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y25)	◇	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y08)	△	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4Y03)	△	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

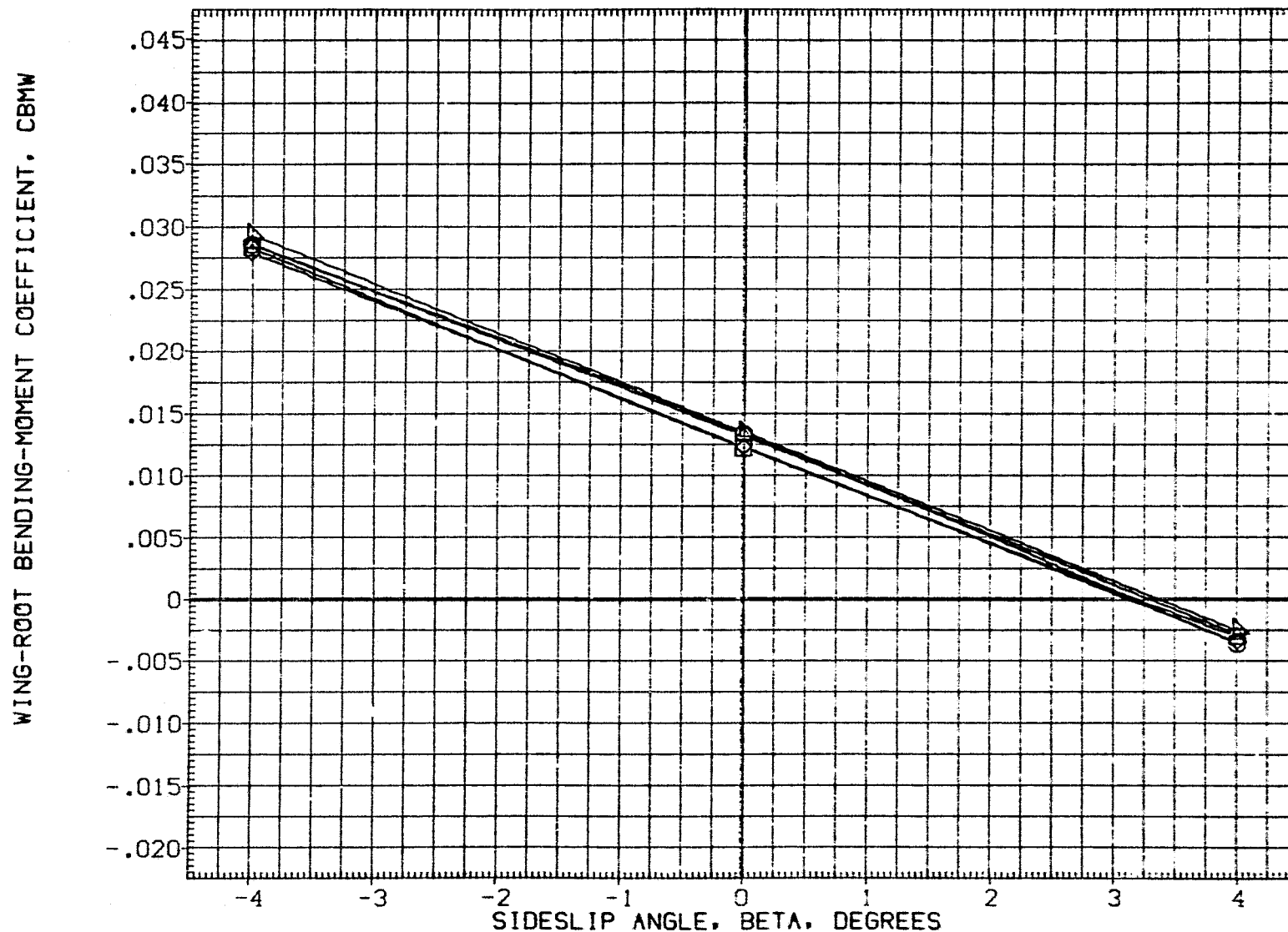


FIG. 66 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.1

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y22)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y25)	◇	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y08)	△	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4Y03)	▽	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.060	1.100	4.250	YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

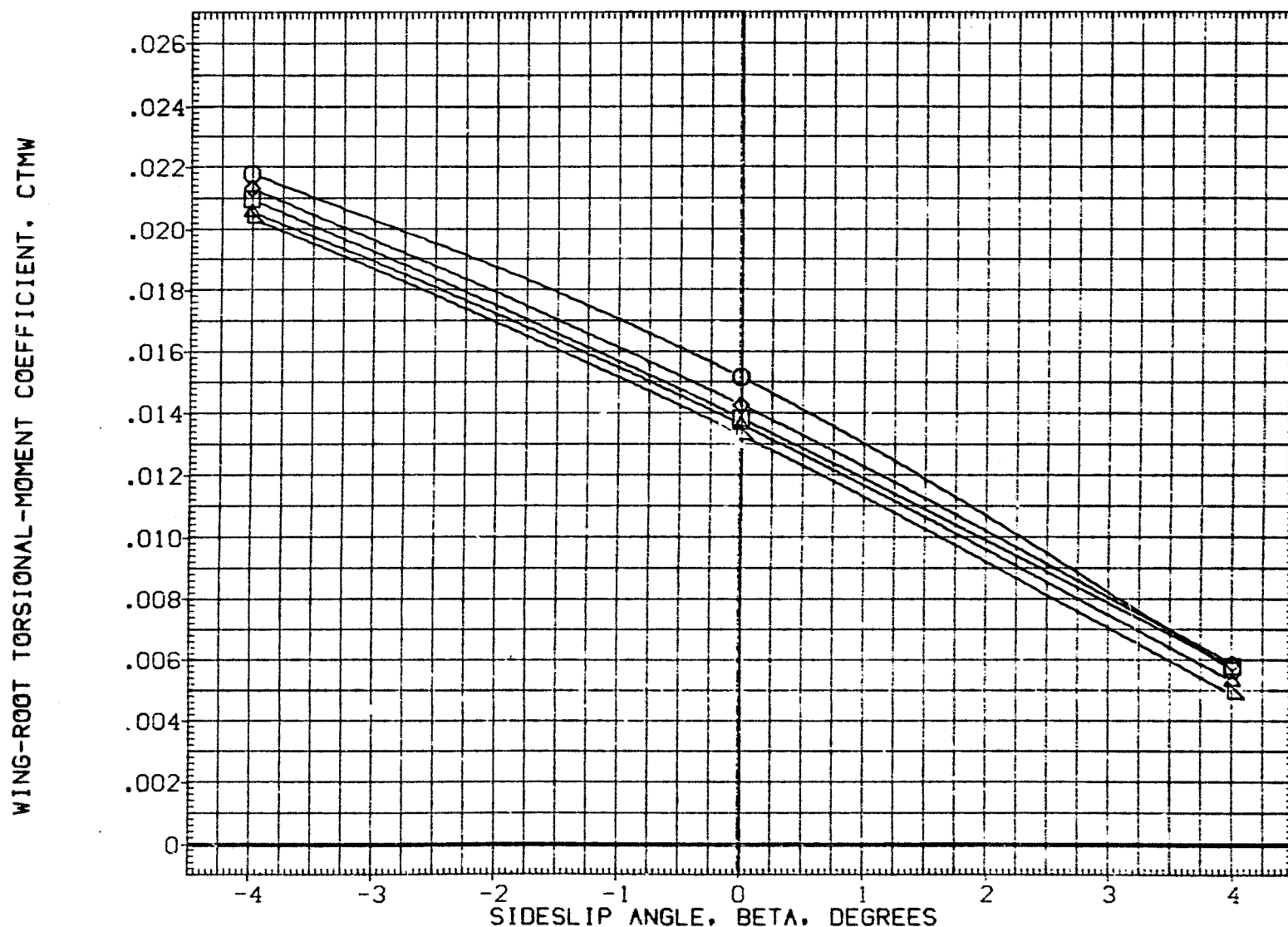


FIG. 56 EFFECT OF PLOMES ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000 IN.
(RE4Y03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

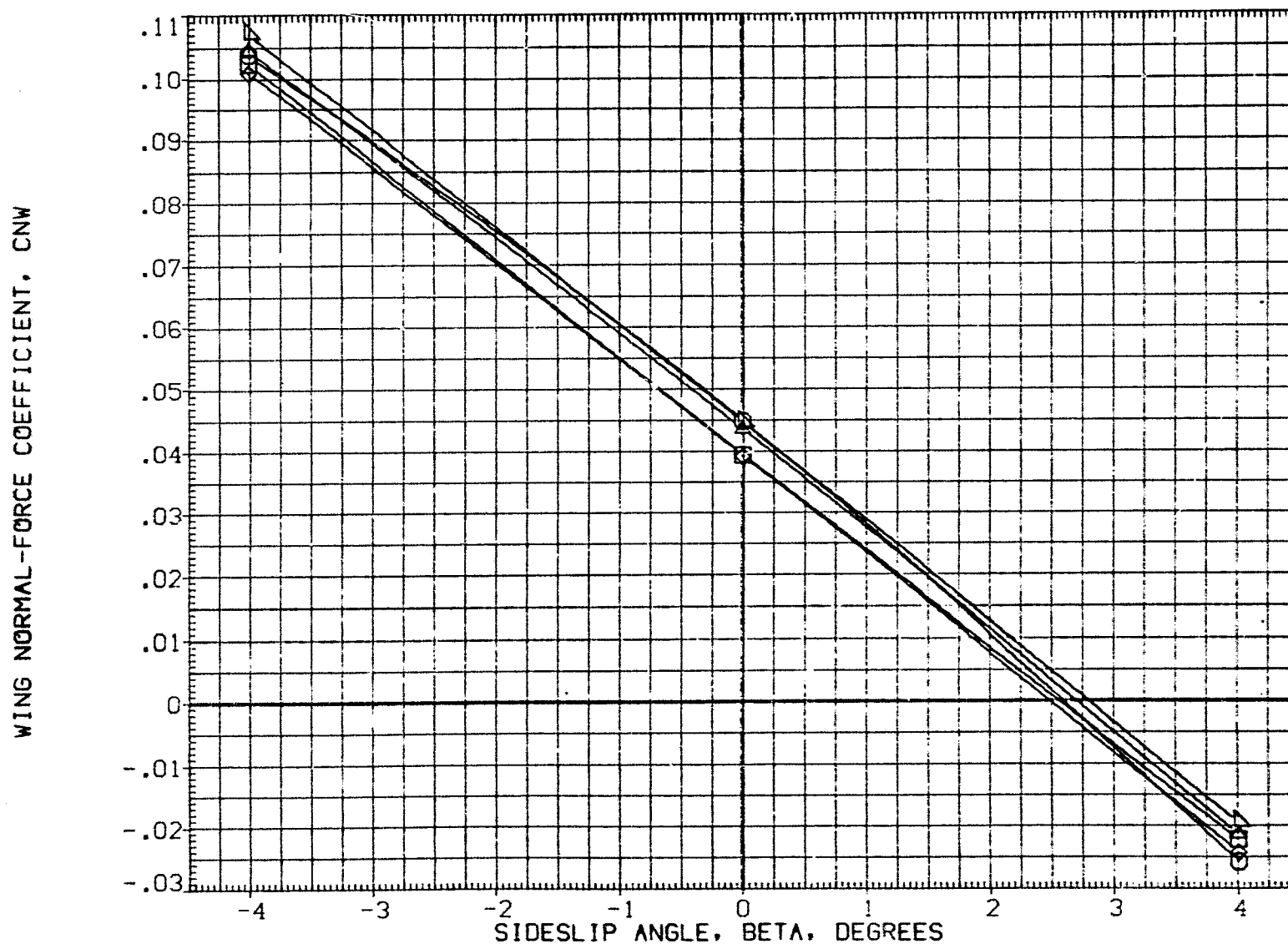


FIG. 66 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4Y04)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

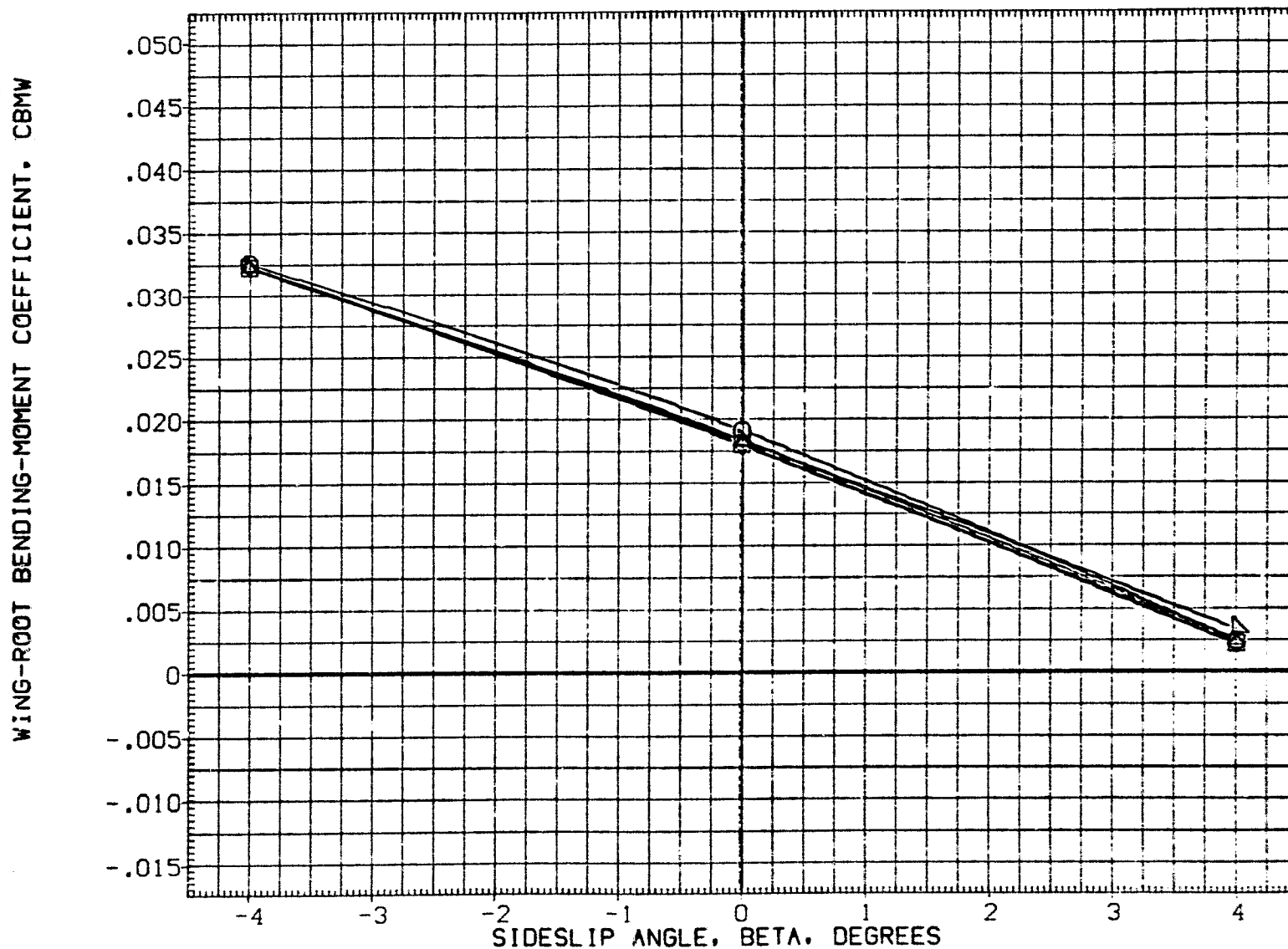


FIG. 67 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-16	ELV-66	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XM RP	.0000 IN.
(RE4Y04)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YM RP	.0000 IN.
						ZM RP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

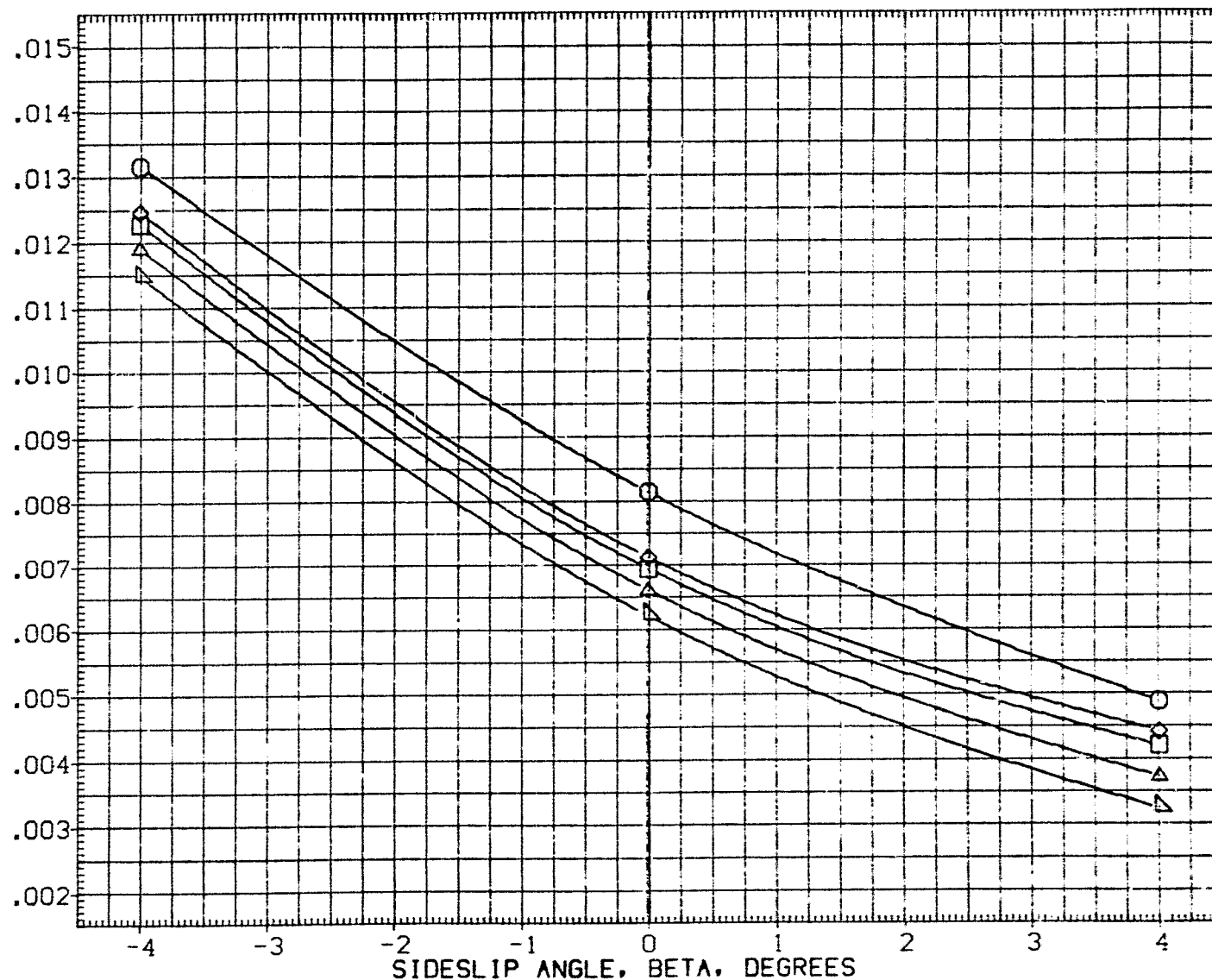


FIG. 67 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4Y04)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

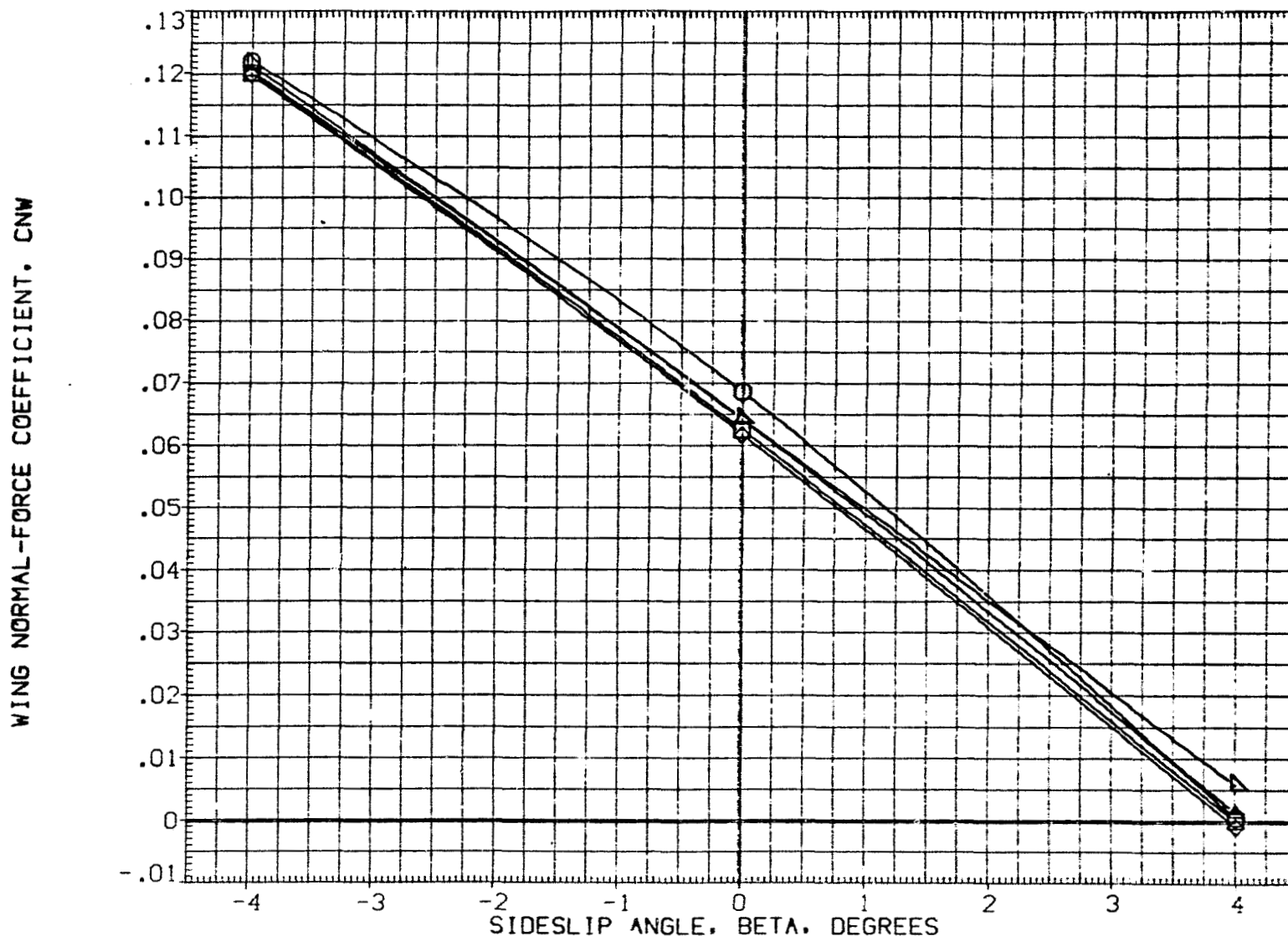


FIG. 67 EFFECT OF PLOUMES ON WING LOADS IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y27)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000 IN.
(RE4Y05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

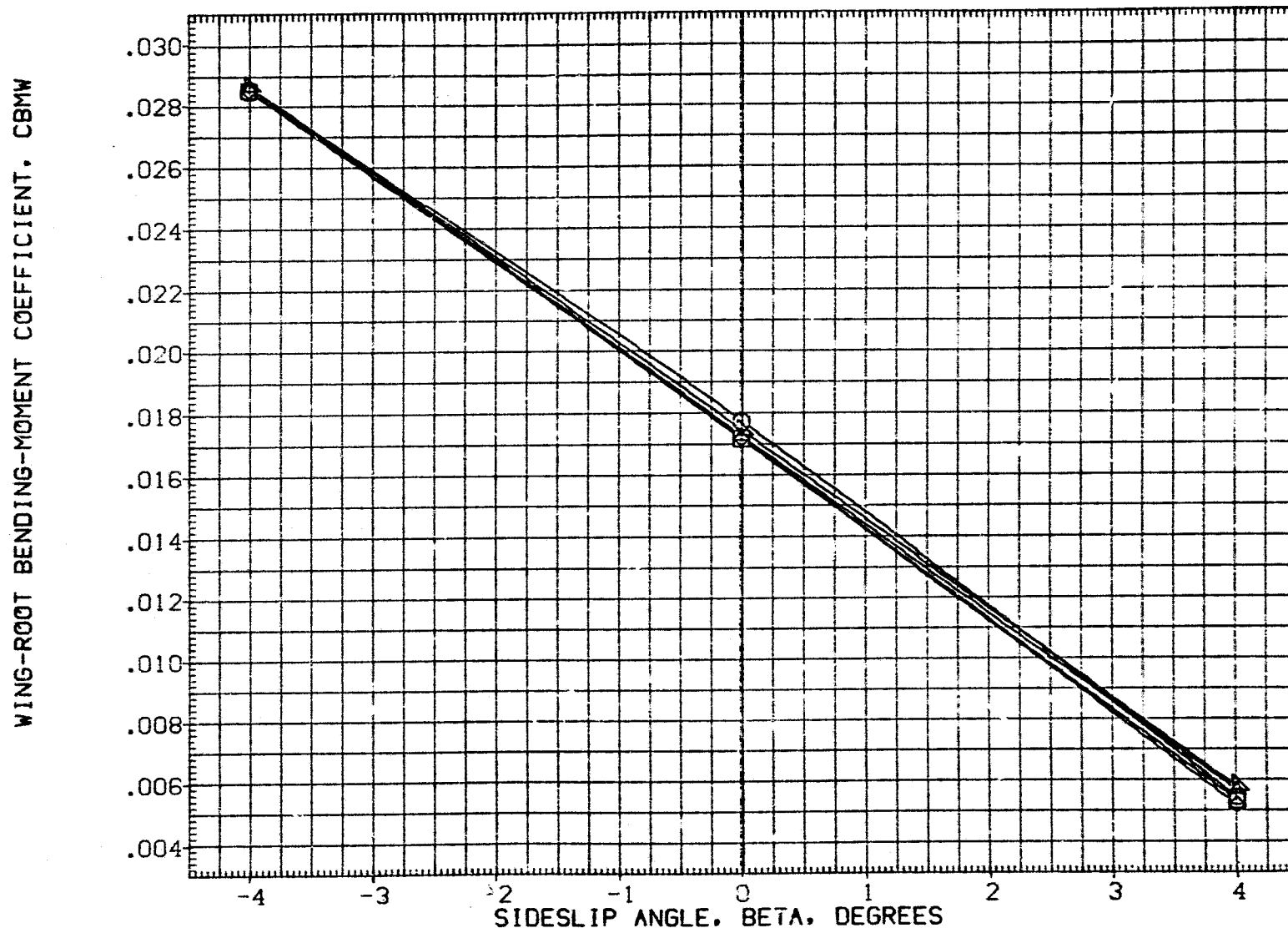


FIG. 68 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SO.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4Y05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

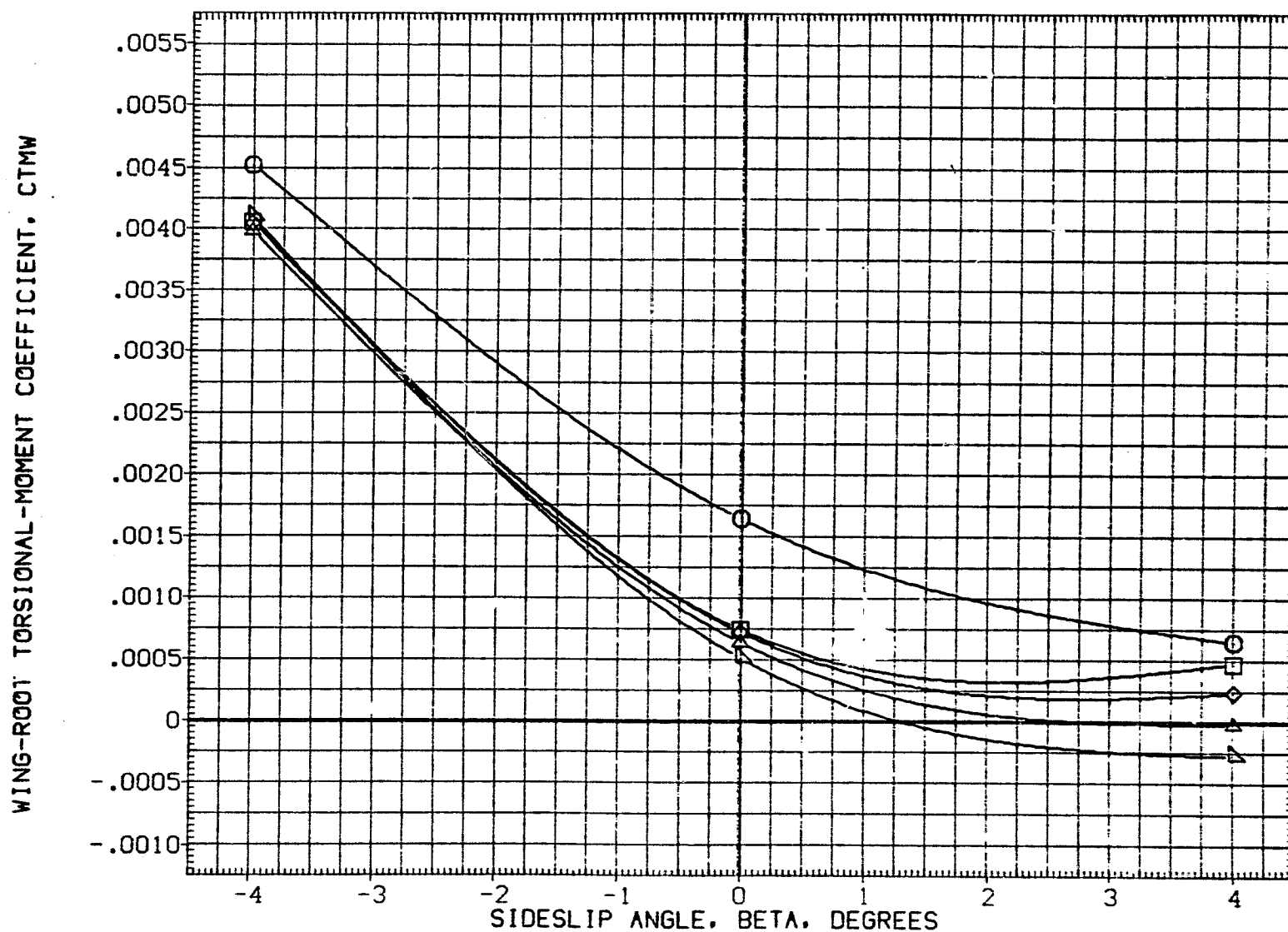


FIG. 68 EFFECT OF PLOMES ON WING LOADS IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4Y05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP		
						SCALE		

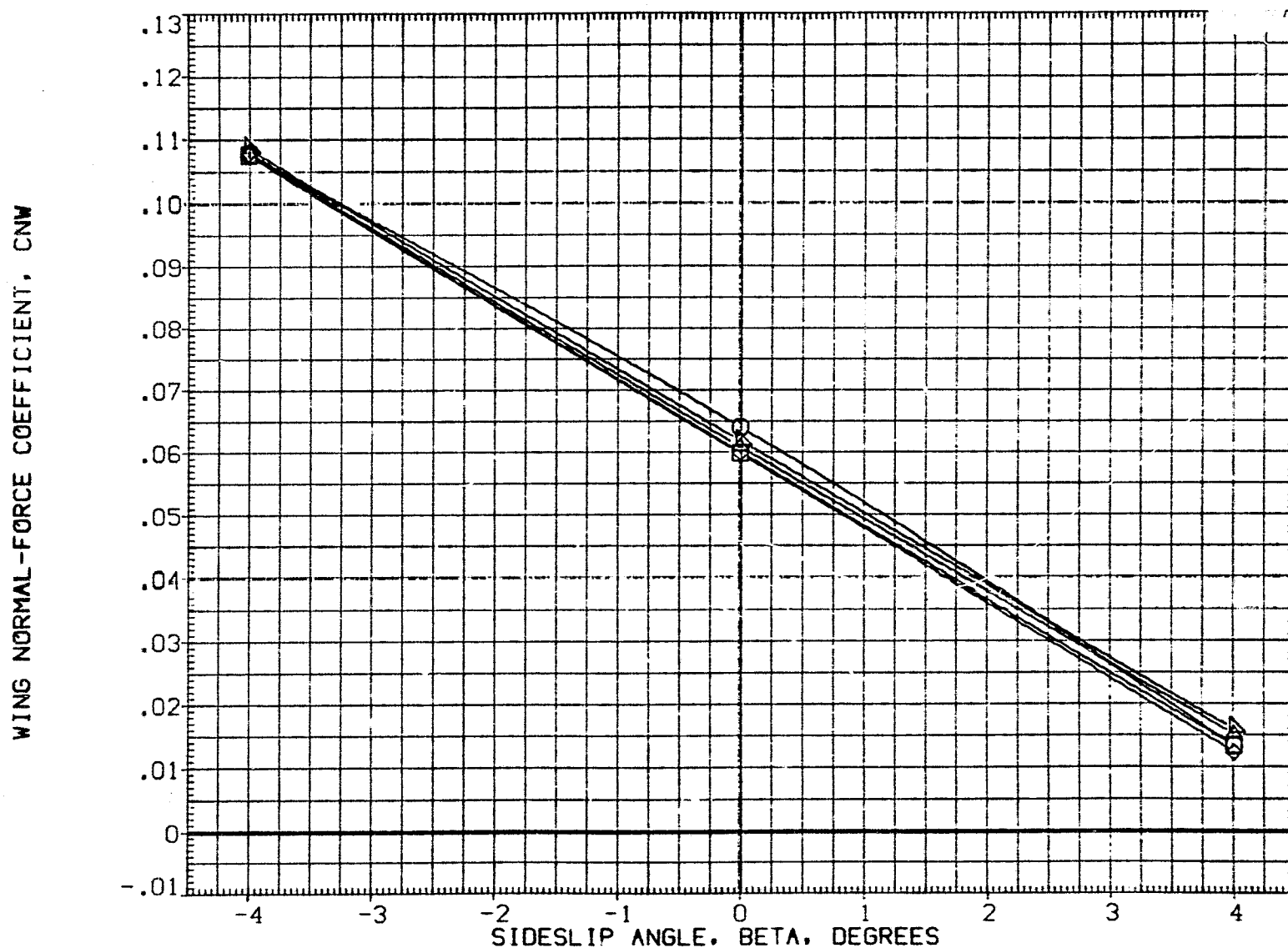


FIG. 68 EFFECT OF PLUMES ON WING LOADS IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

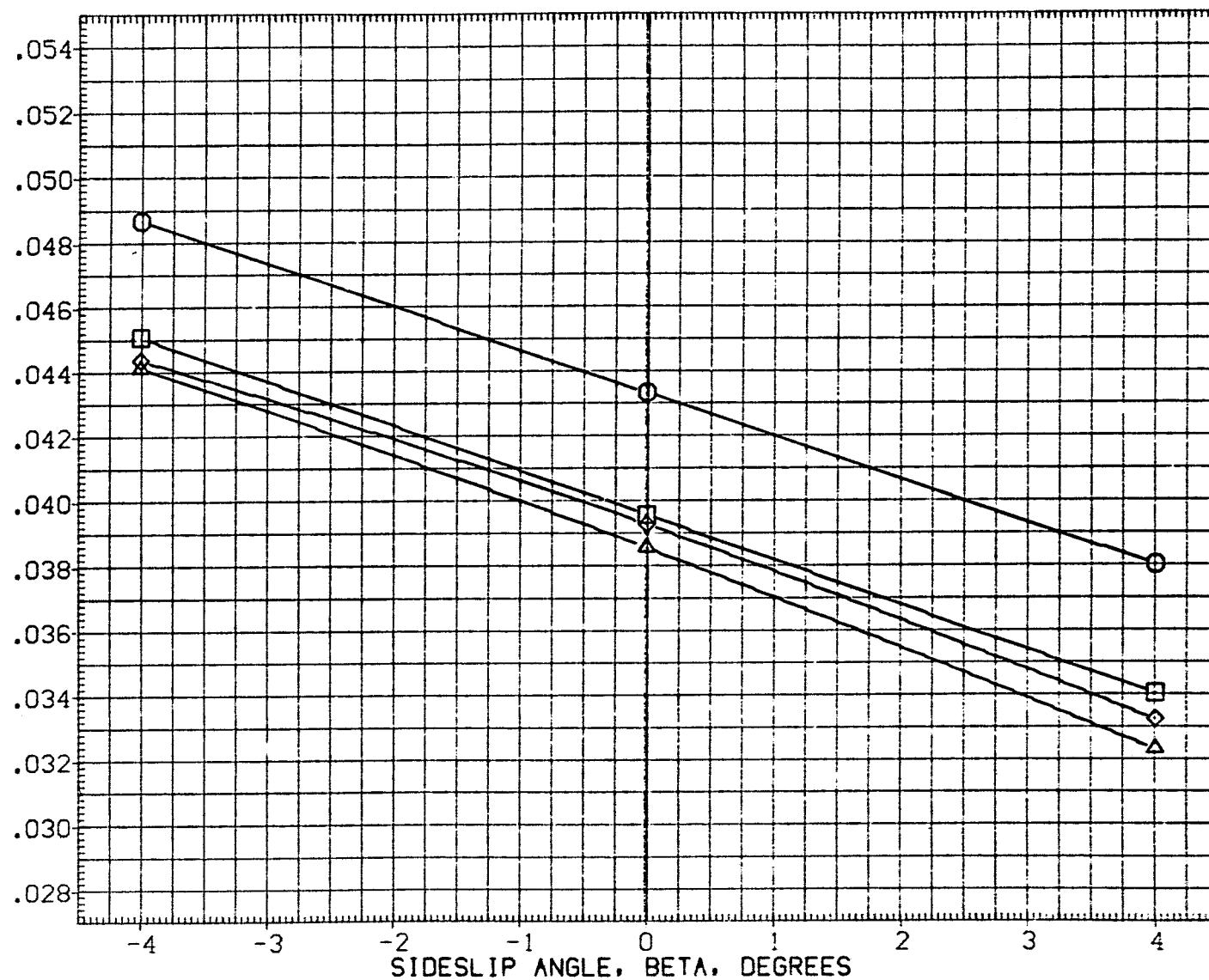


FIG. 69 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
RE4Y06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.600	3.400	BREF	1290.3000	IN.
RE4Y01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

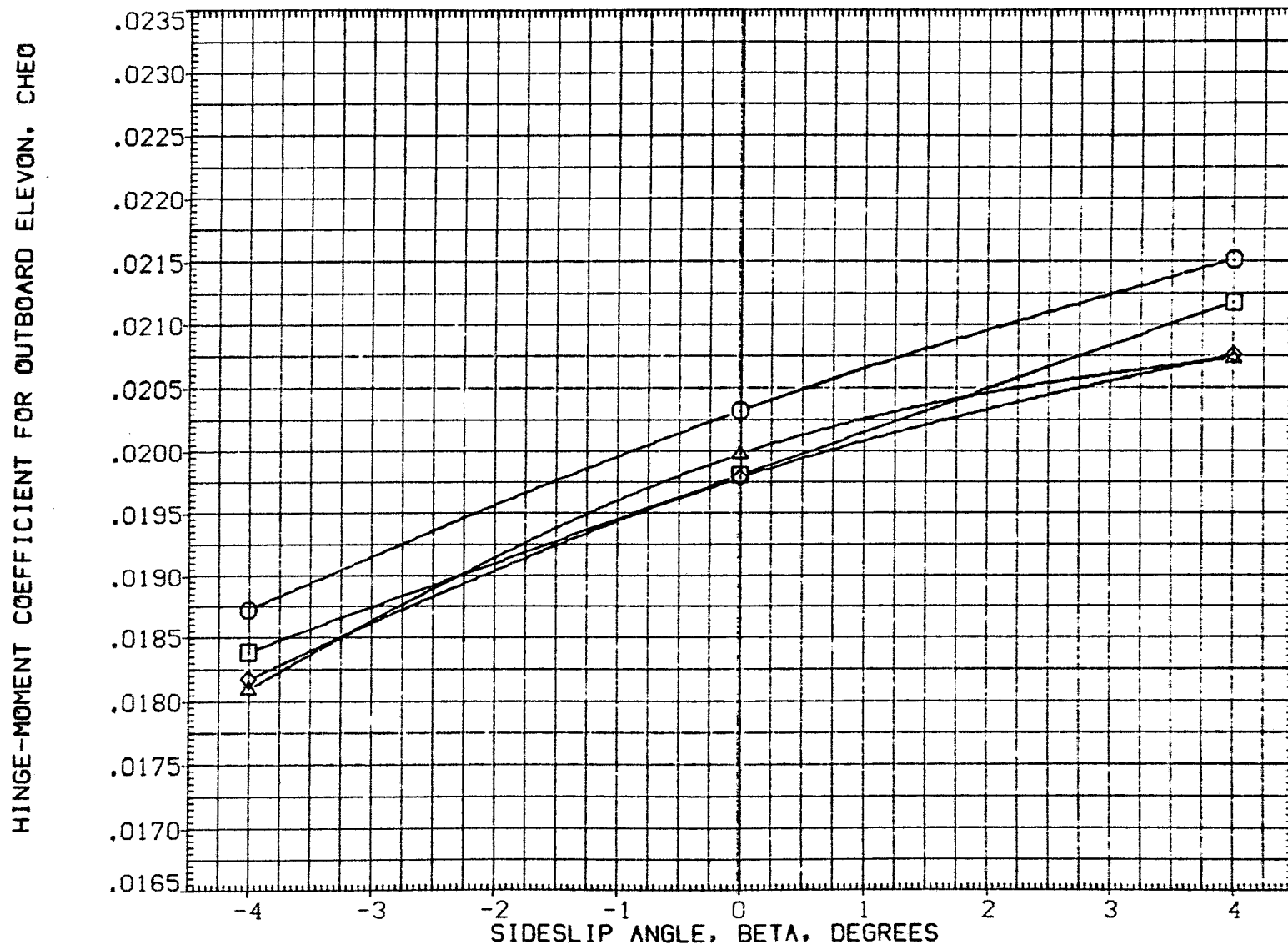


FIG. 69 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y07)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y02)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

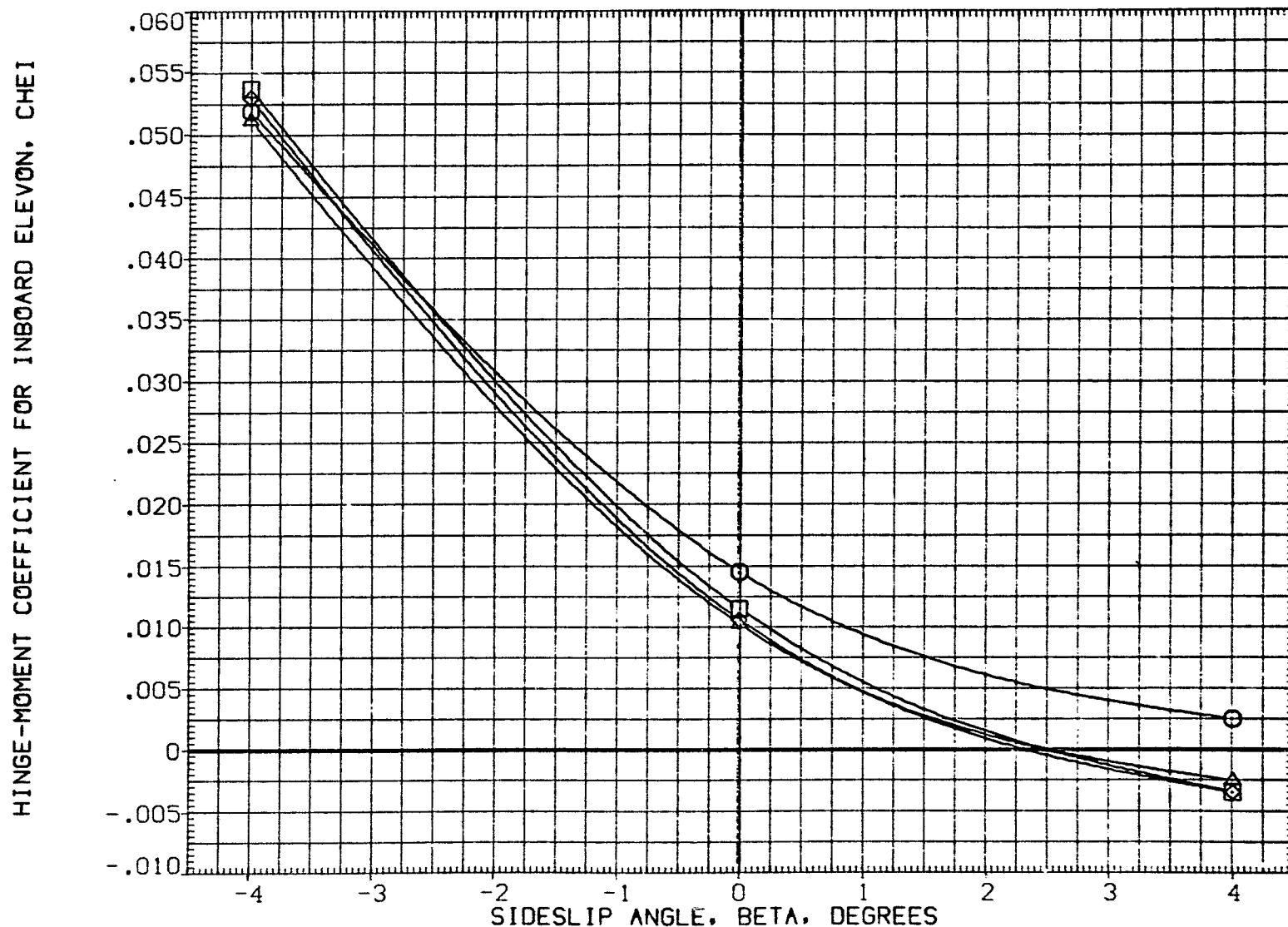


FIG. 70 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.9

(A) ALPHA = .00

DATA	SYMBOL	CONFIGURATION	DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	□	ARC 11-023	1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y21)	◇	ARC 11-023	1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y07)	△	ARC 11-023	1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y02)	△	ARC 11-023	1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.900	4.250	XMRP	.0000	IN.
								YMRP	.0000	IN.
								ZMRP	.0000	IN.
								SCALE	.0200	

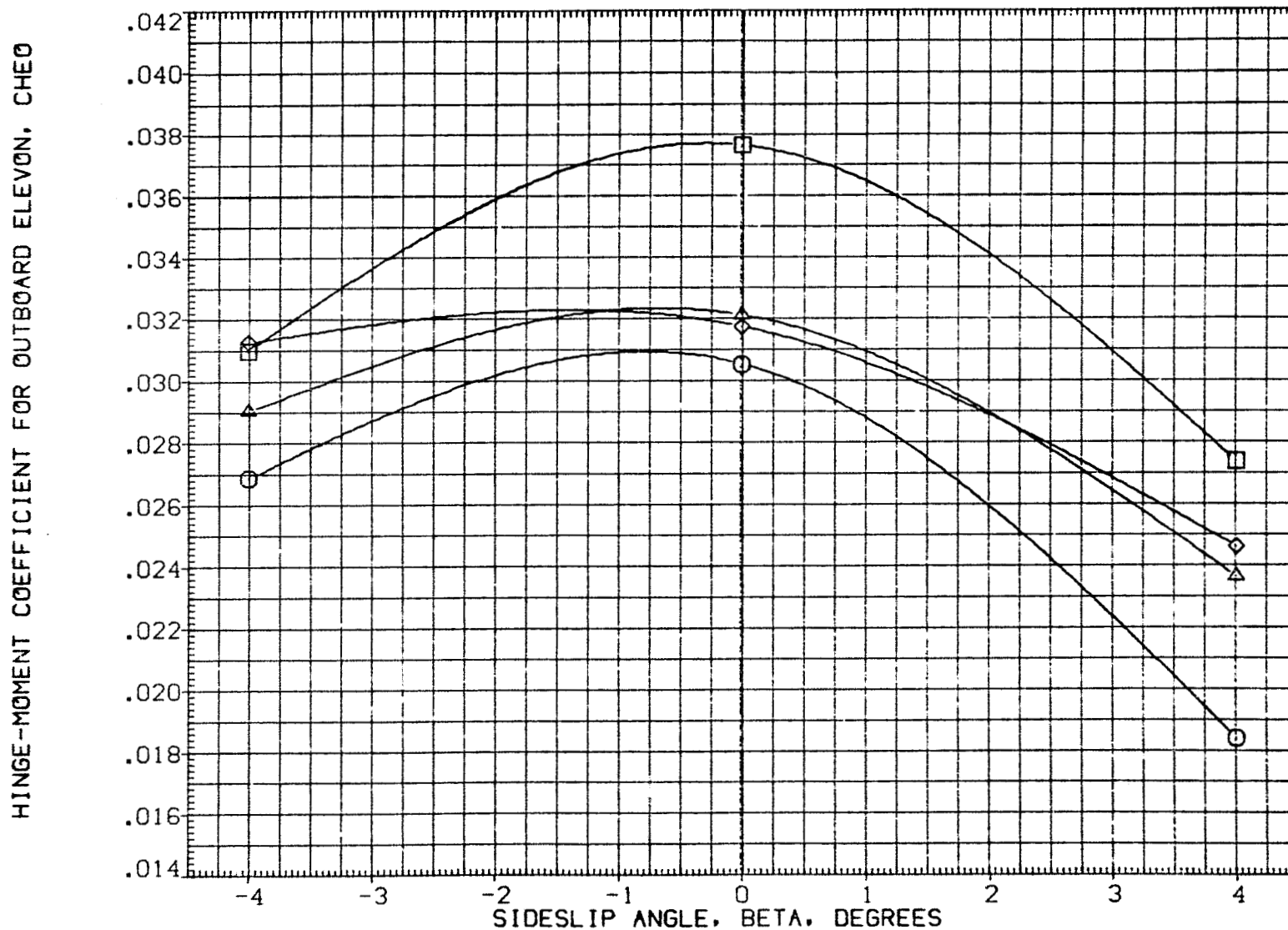


FIG. 70 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4Y03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

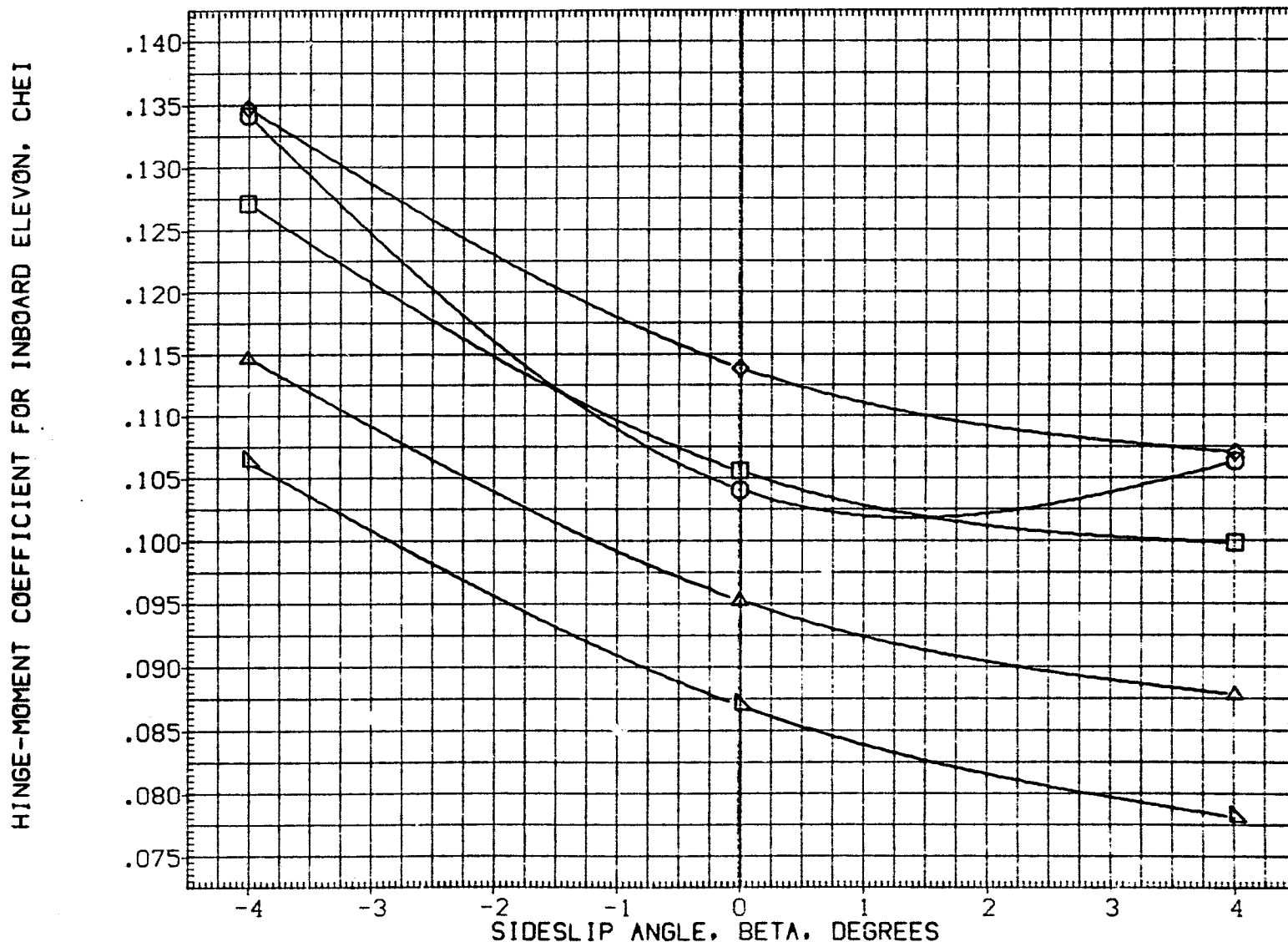


FIG. 71 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y08)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000 IN.
(RE4Y03)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.100	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

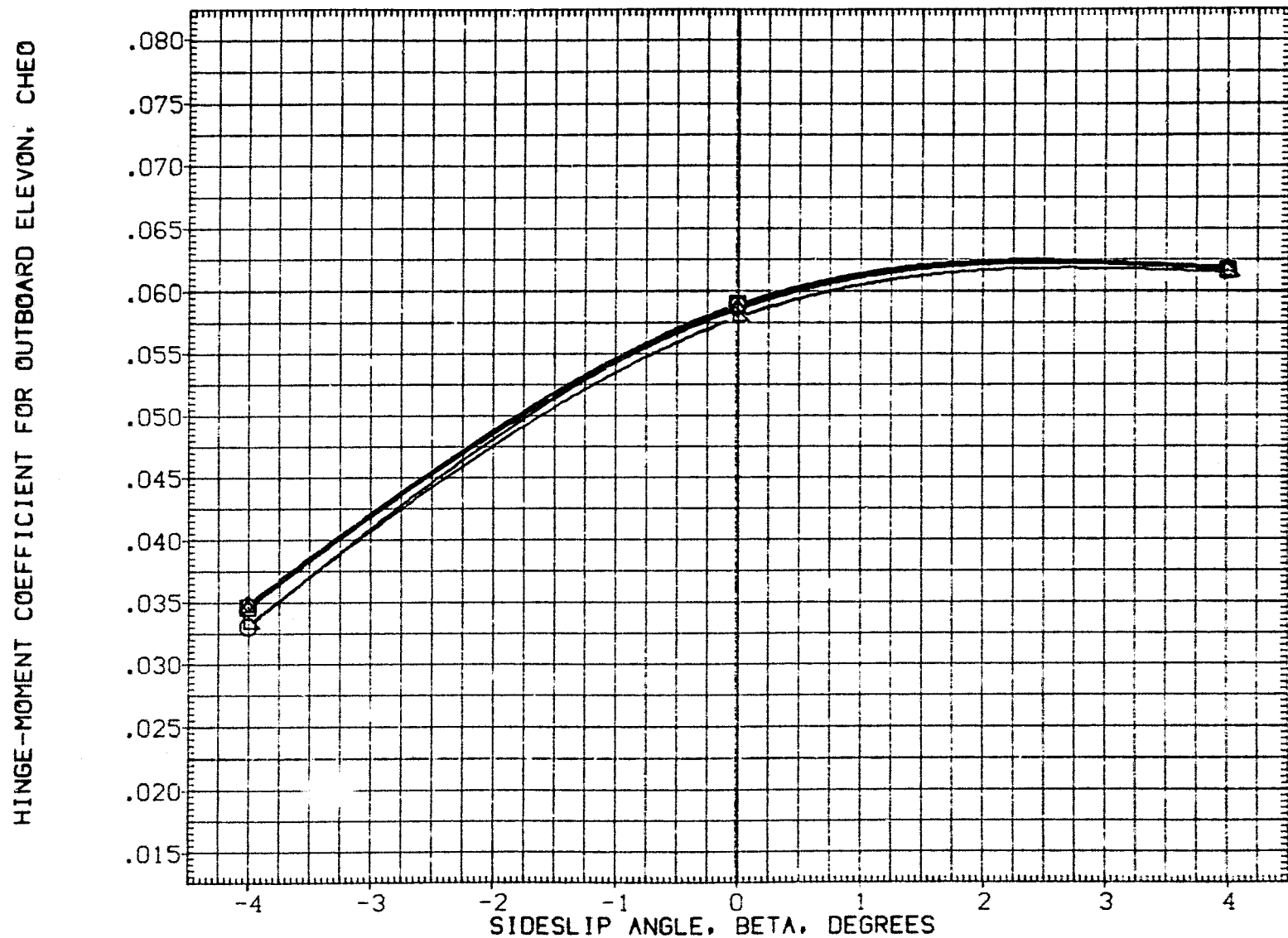


FIG. 71 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4Y26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4Y09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4Y04)	ARC 11-023 1A80 OTS (SFB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

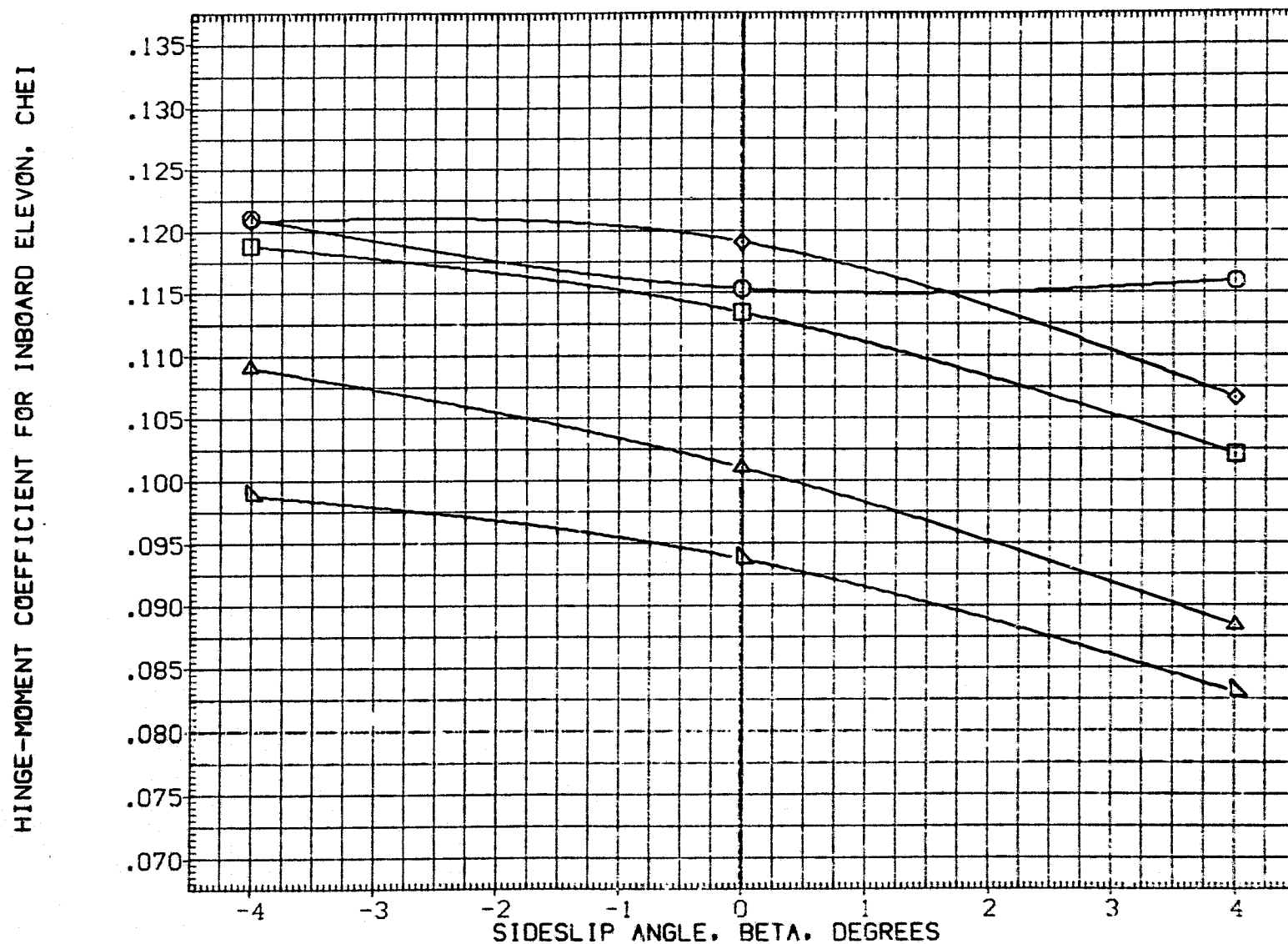


FIG. 72 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y26)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y09)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4Y04)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

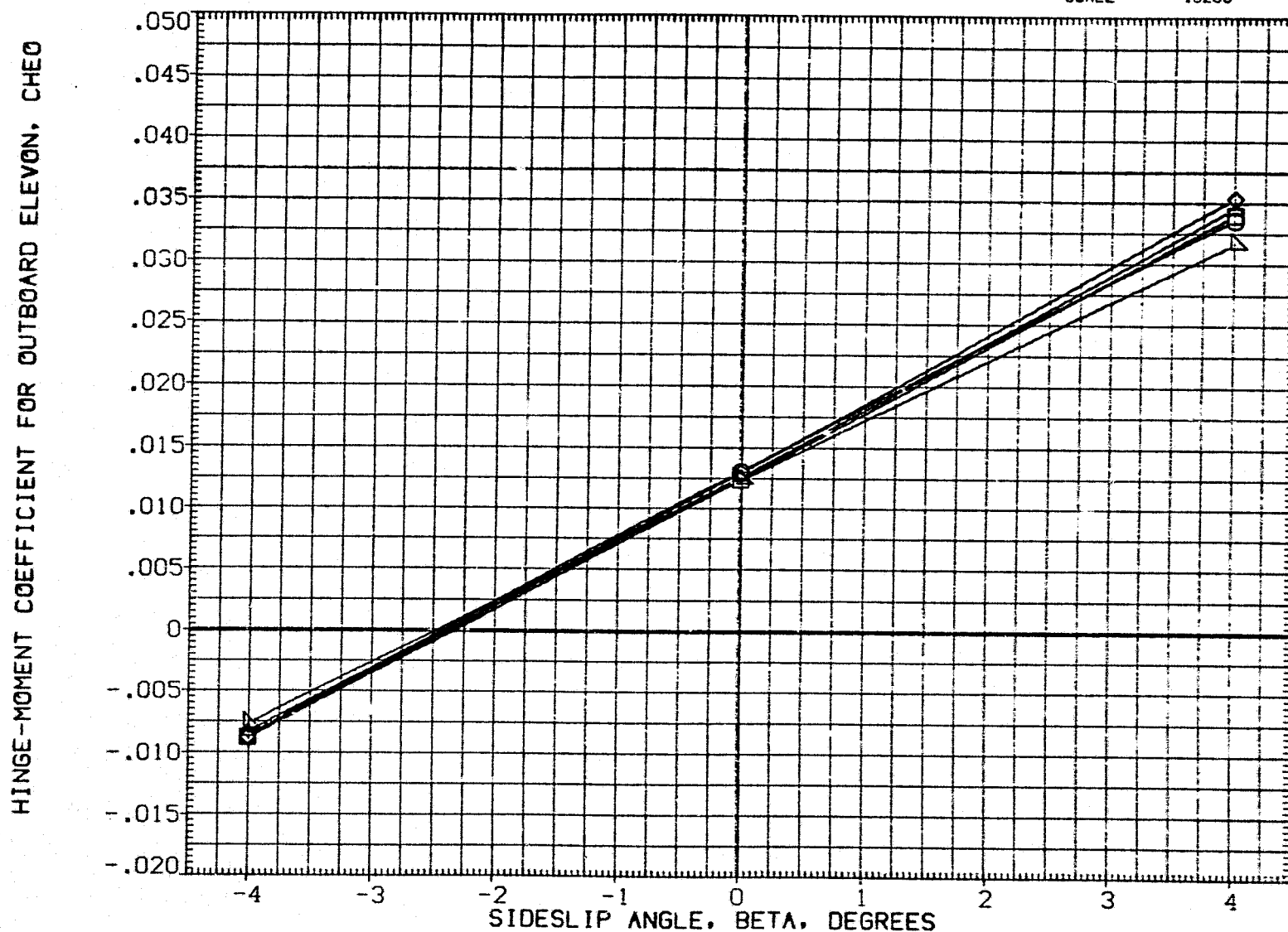


FIG. 72 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4Y05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

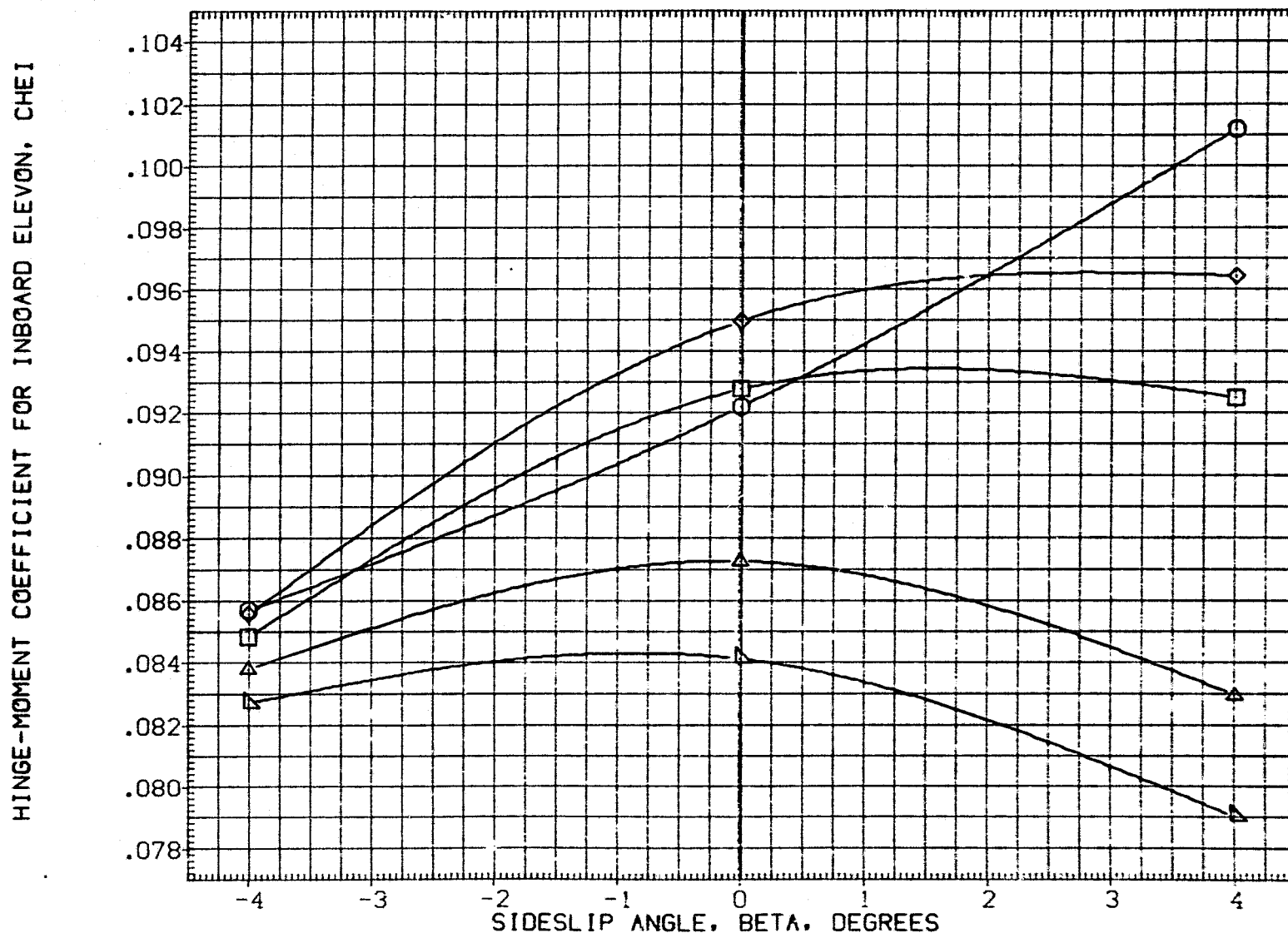


FIG. 73 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CB	MACH	RN/L	REFERENCE INFORMATION
(RE4Y3.)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF 1290.3000 IN.
(RE4Y27)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	1.400	4.250	BREF 1290.3000 IN.
(RE4Y10)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	1.400	4.250	XMRP .0000 IN.
(RE4Y05)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	1.400	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

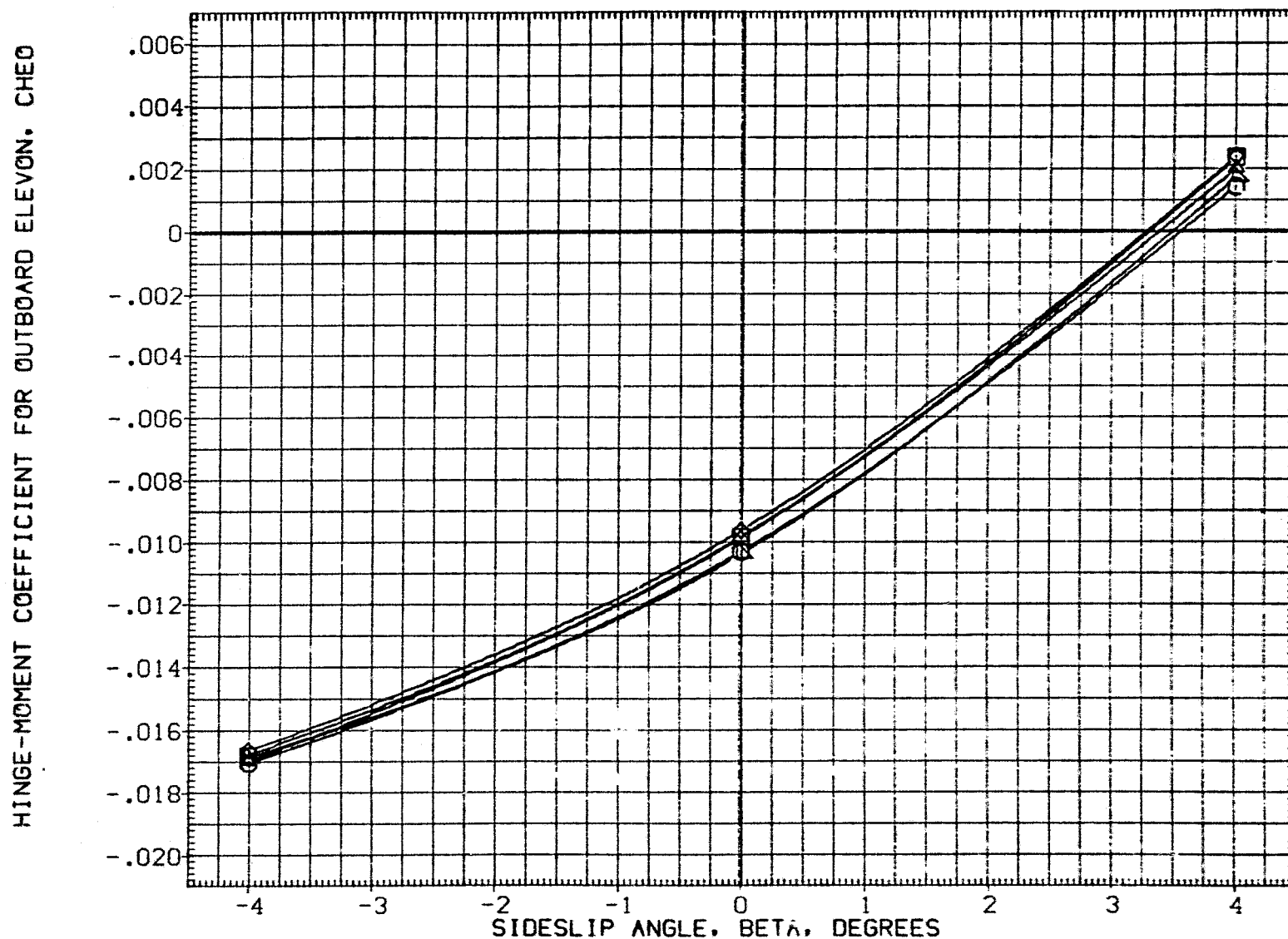


FIG. 73 EFFECT OF PLUMES ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4X20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4X11)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4XB5)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

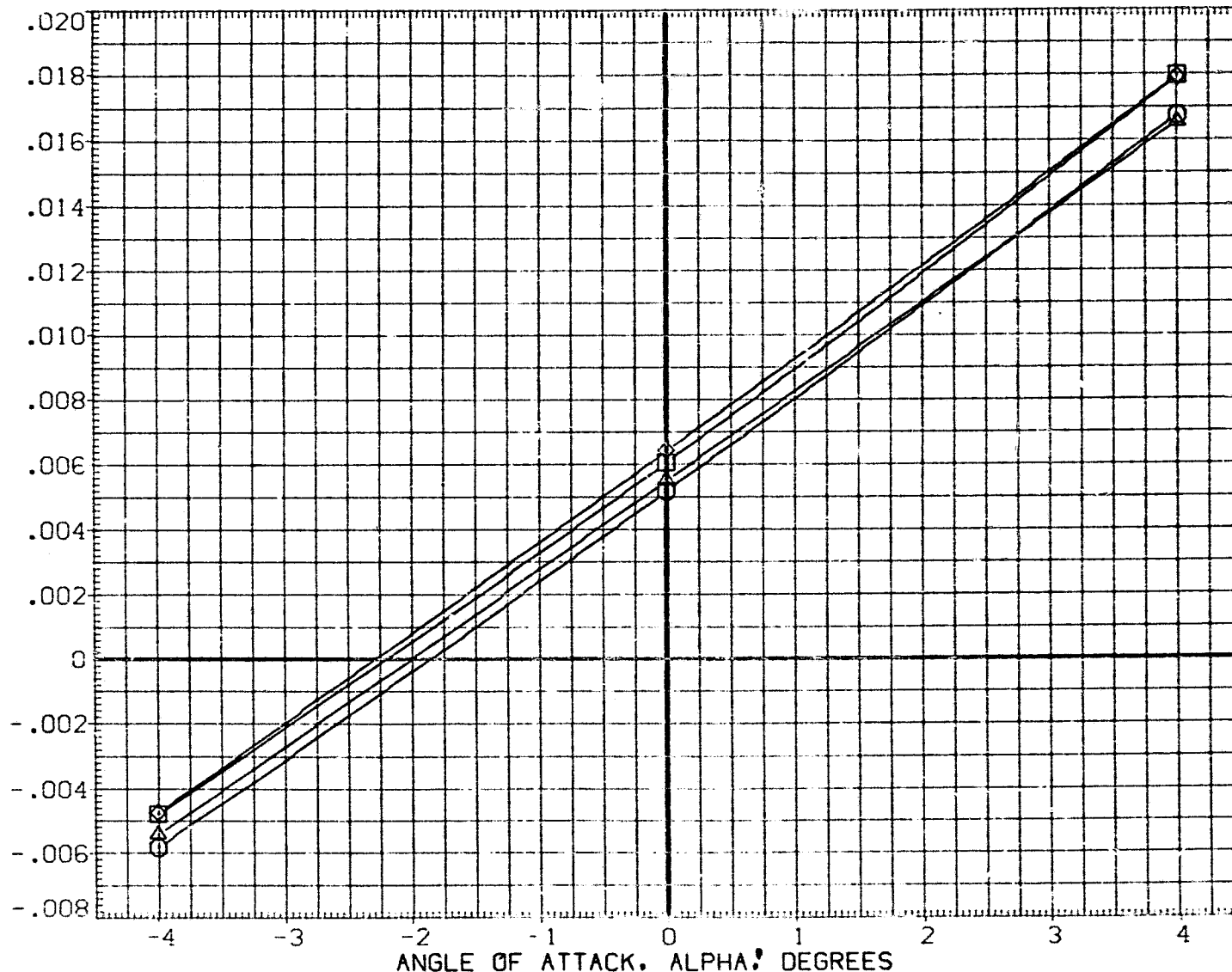


FIG. 74 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.6

(A)BFTA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X20) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 "N.
(RE4X11) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000 "N.
(RE4XB5) △	ARC 11-023 1A80 OTS (SRB NO.1) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRF	.0000 "N.
						YMRF	.0000 "N.
						ZMRF	.0000 "N.
						SCALE	.0000

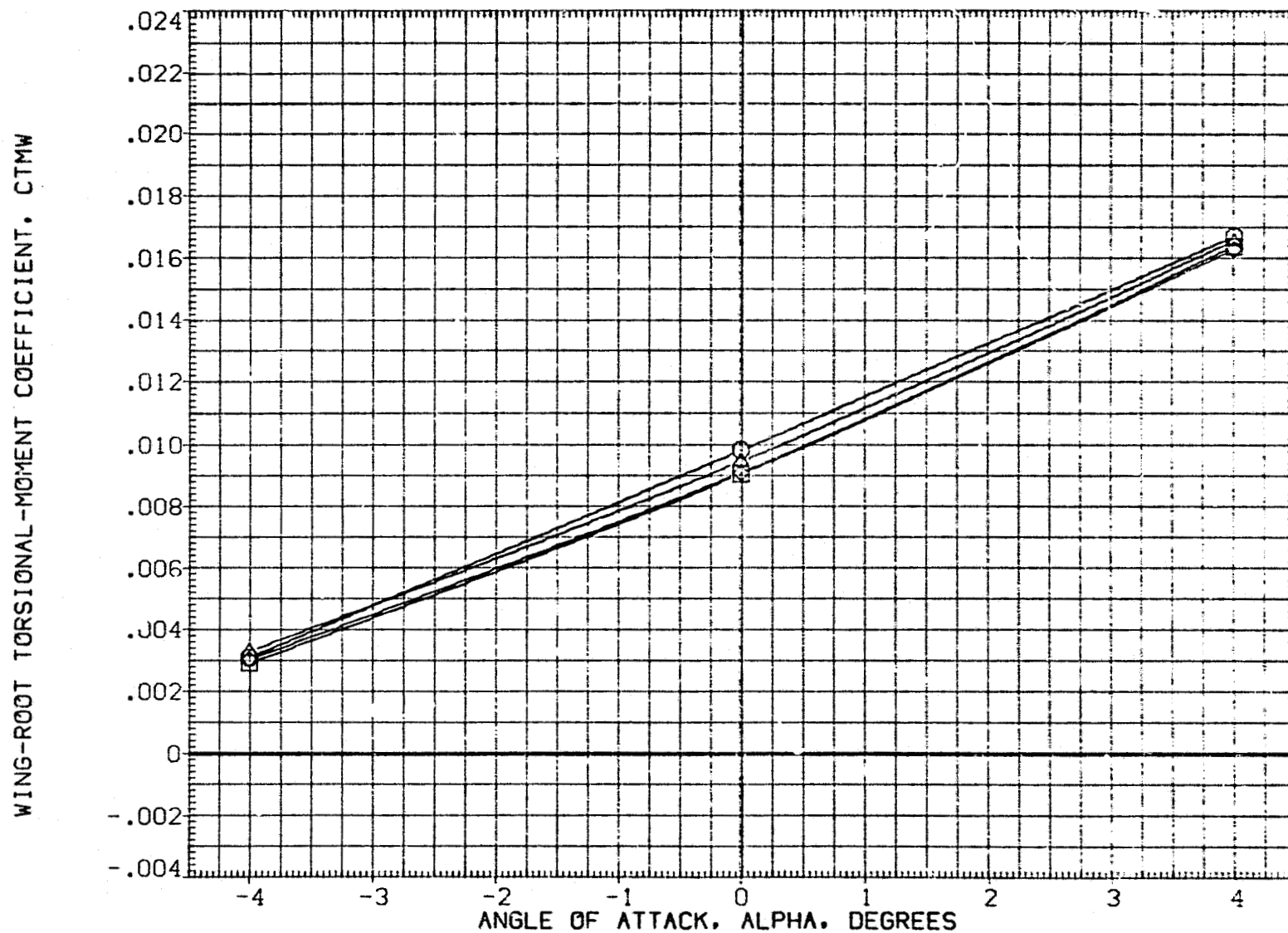


FIG. 74 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.6

(A) RFTA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4X11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4XB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

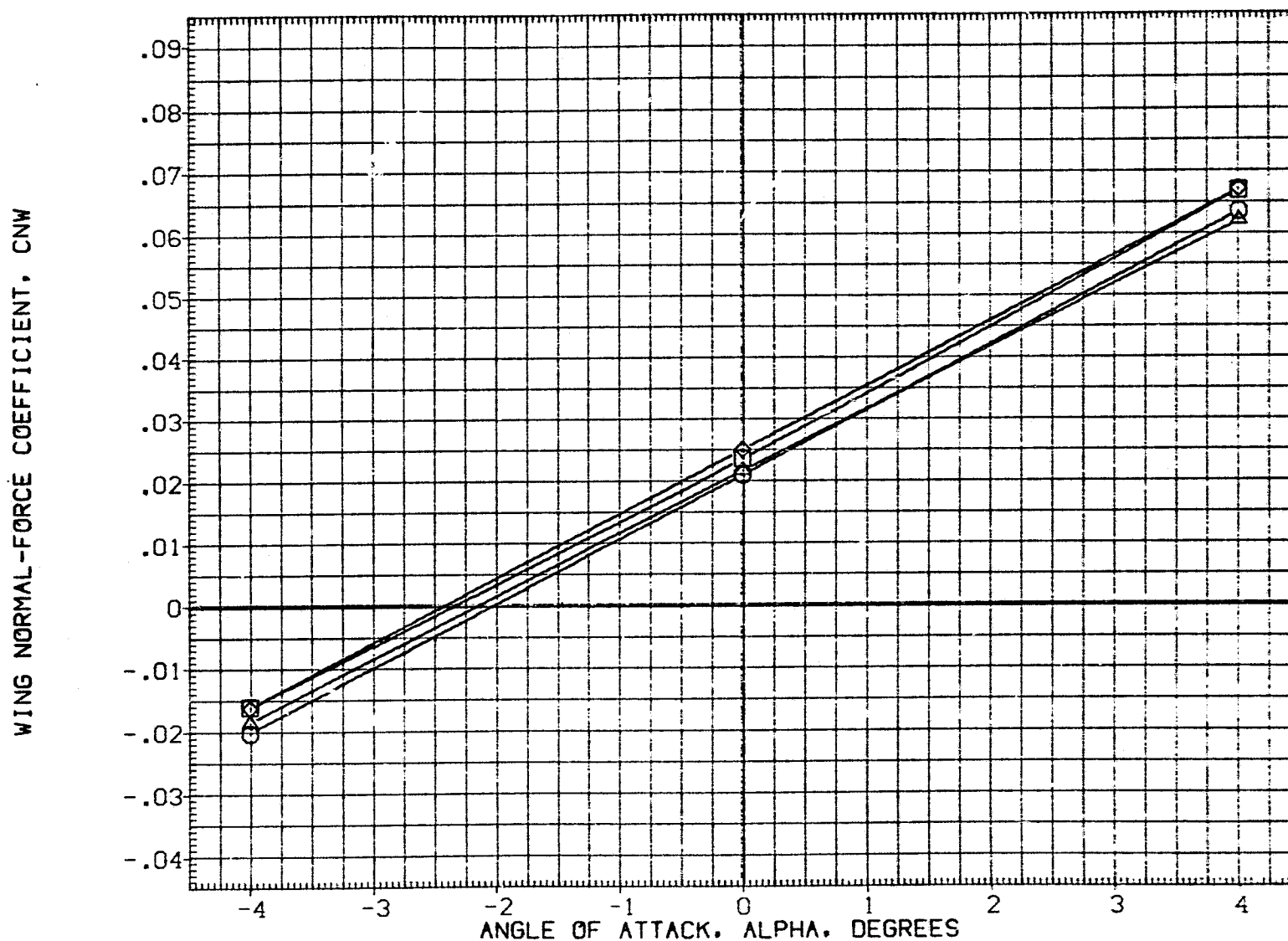


FIG. 74 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4X16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	SREF	1290.3000	IN.
(RE4X12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4XB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

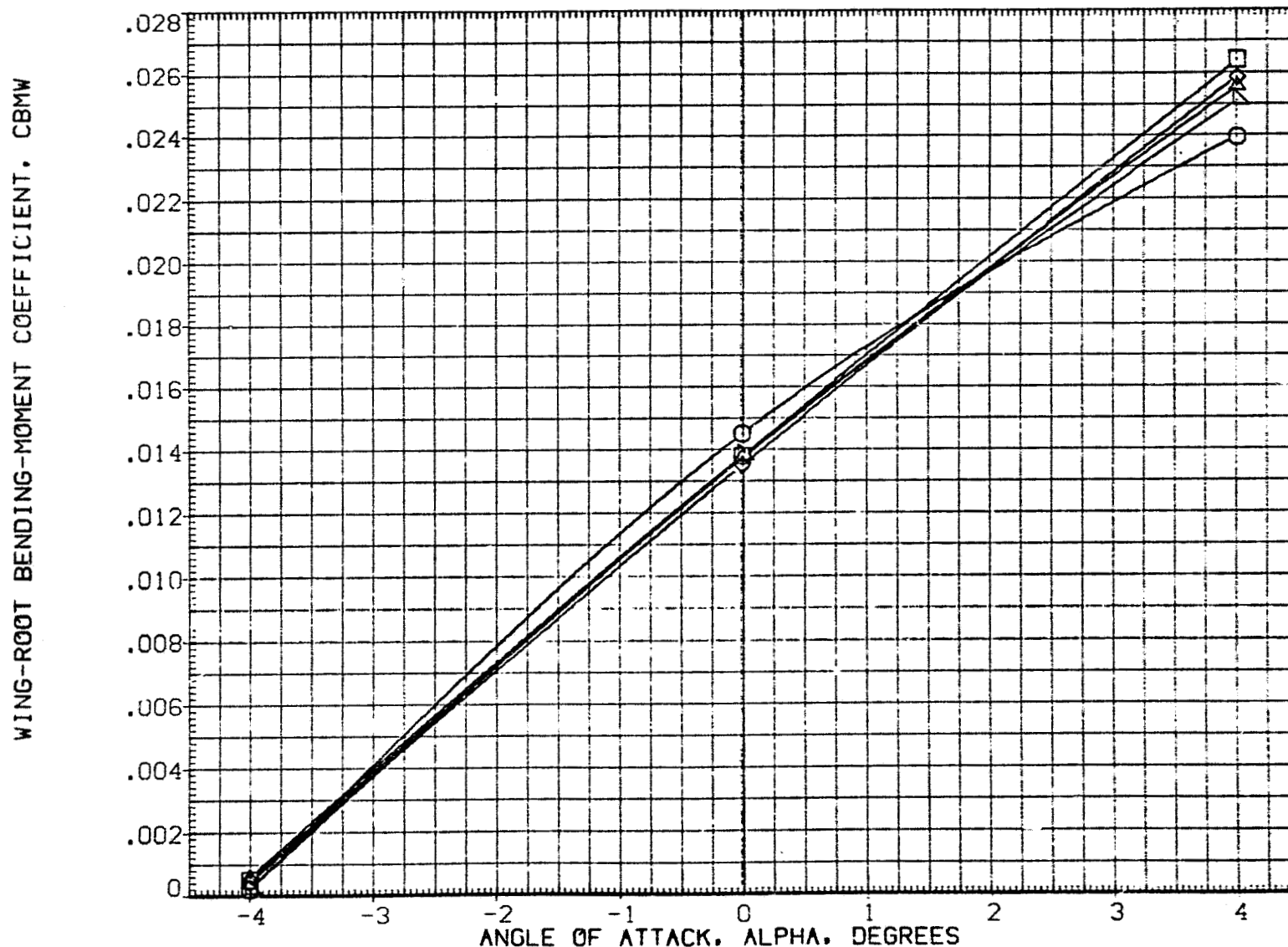


FIG. 75 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4X16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4X12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4XB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

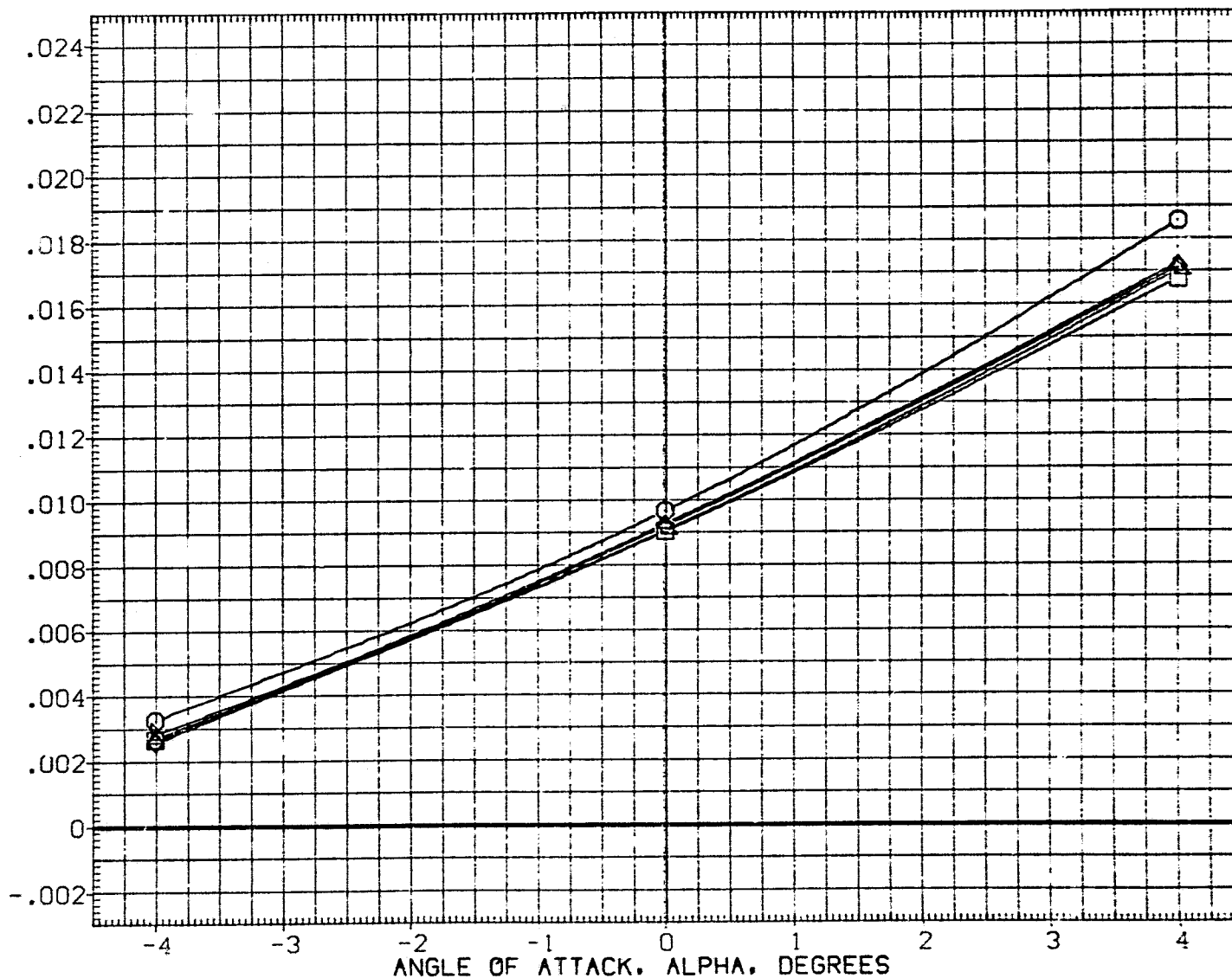


FIG. 75 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
(RE4X29)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF 2690.0000 50.FT.
(RE4X21)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF 1290.3000 IN.
(RE4X16)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF 1290.3000 IN.
(RE4X12)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP .0000 IN.
(RE4XB6)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

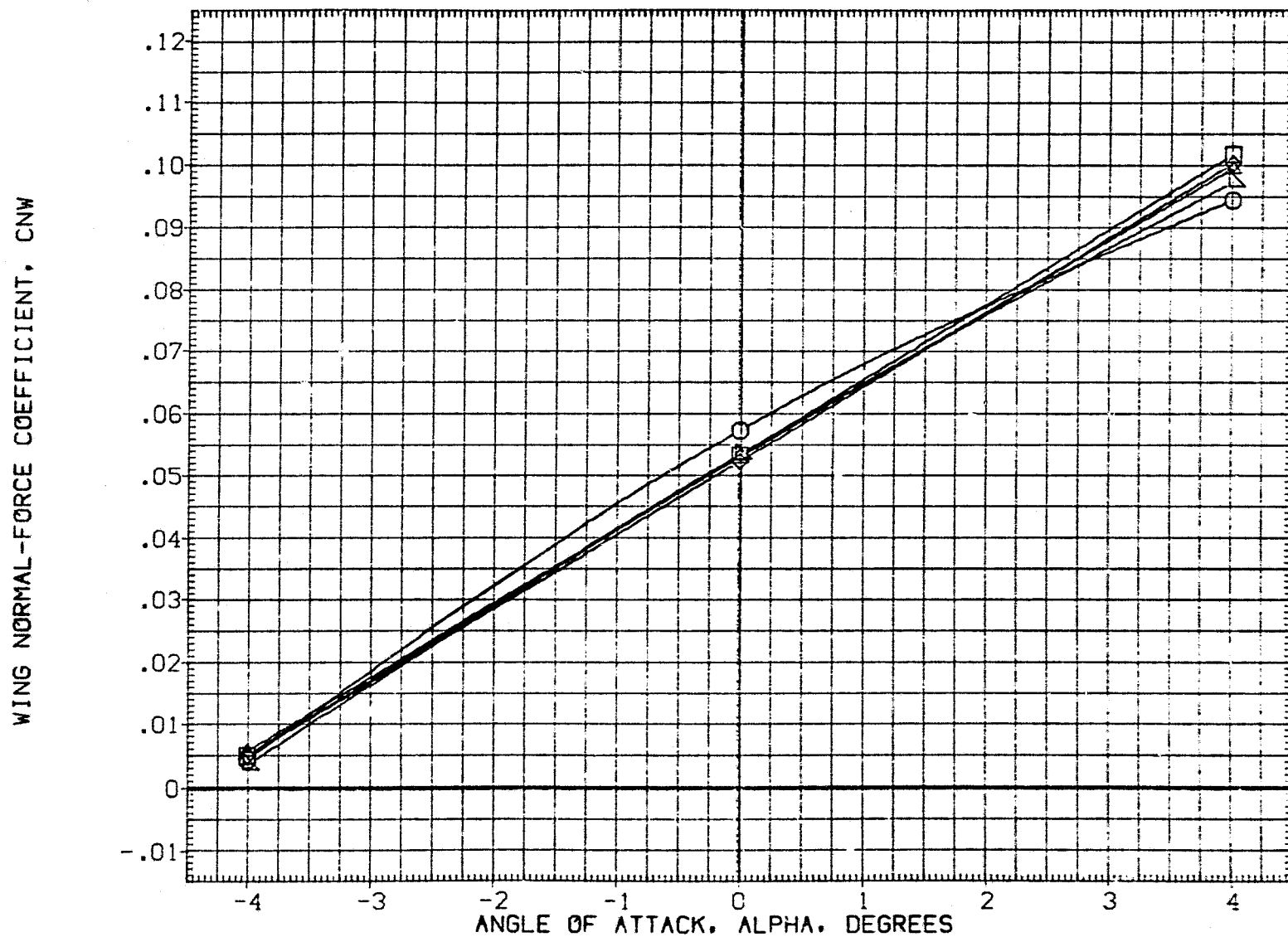


FIG. 75 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4XB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

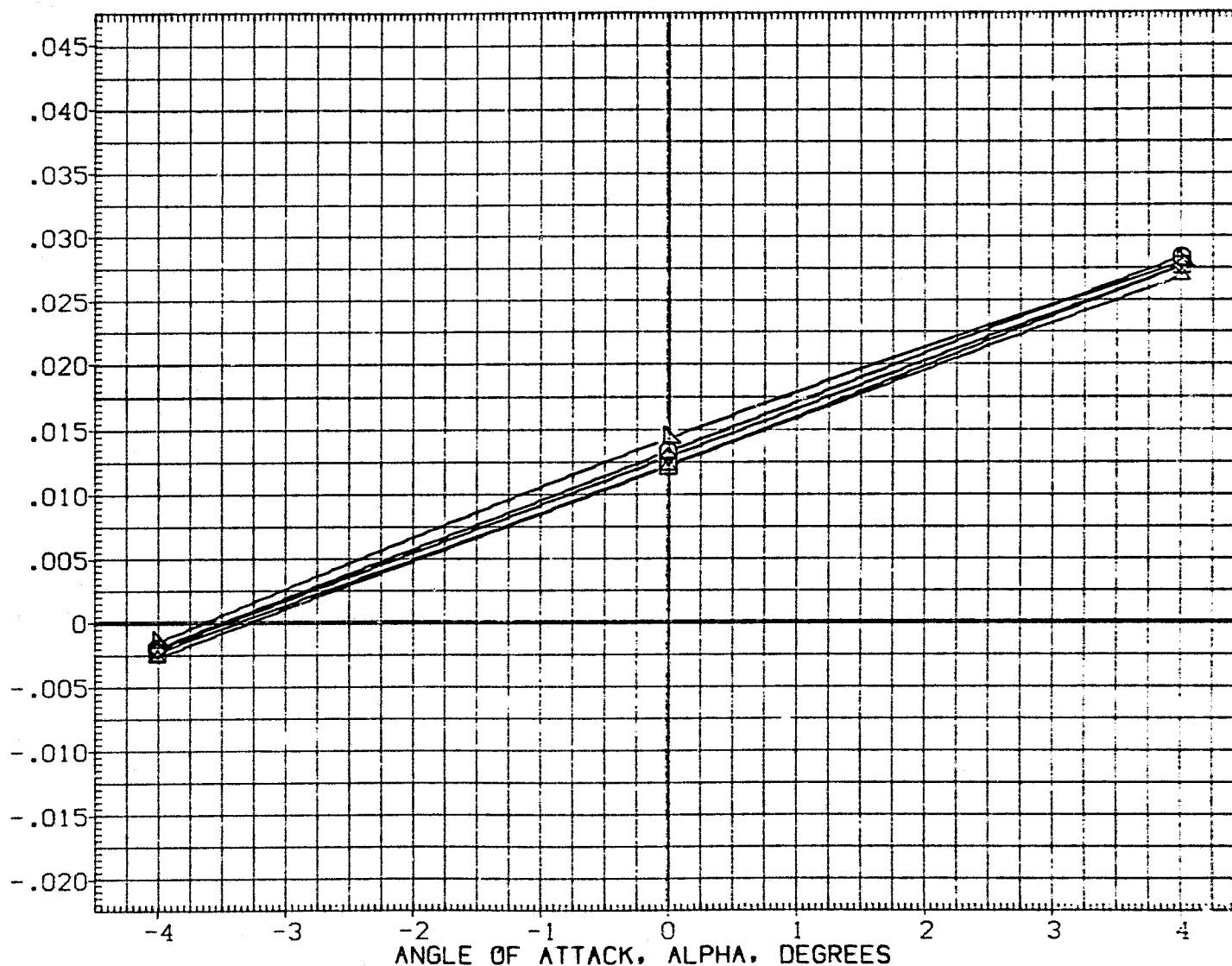


FIG. 76 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION
(RE4X30)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF 2690.0000 SQ.FT.
(RE4X22)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF 1290.3000 IN.
(RE4X17)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF 1290.3000 IN.
(RE4X13)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP .0000 IN.
(RE4XB7)	▽	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP .0000 IN.
							ZMRP .0000 IN.
							SCALE .0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

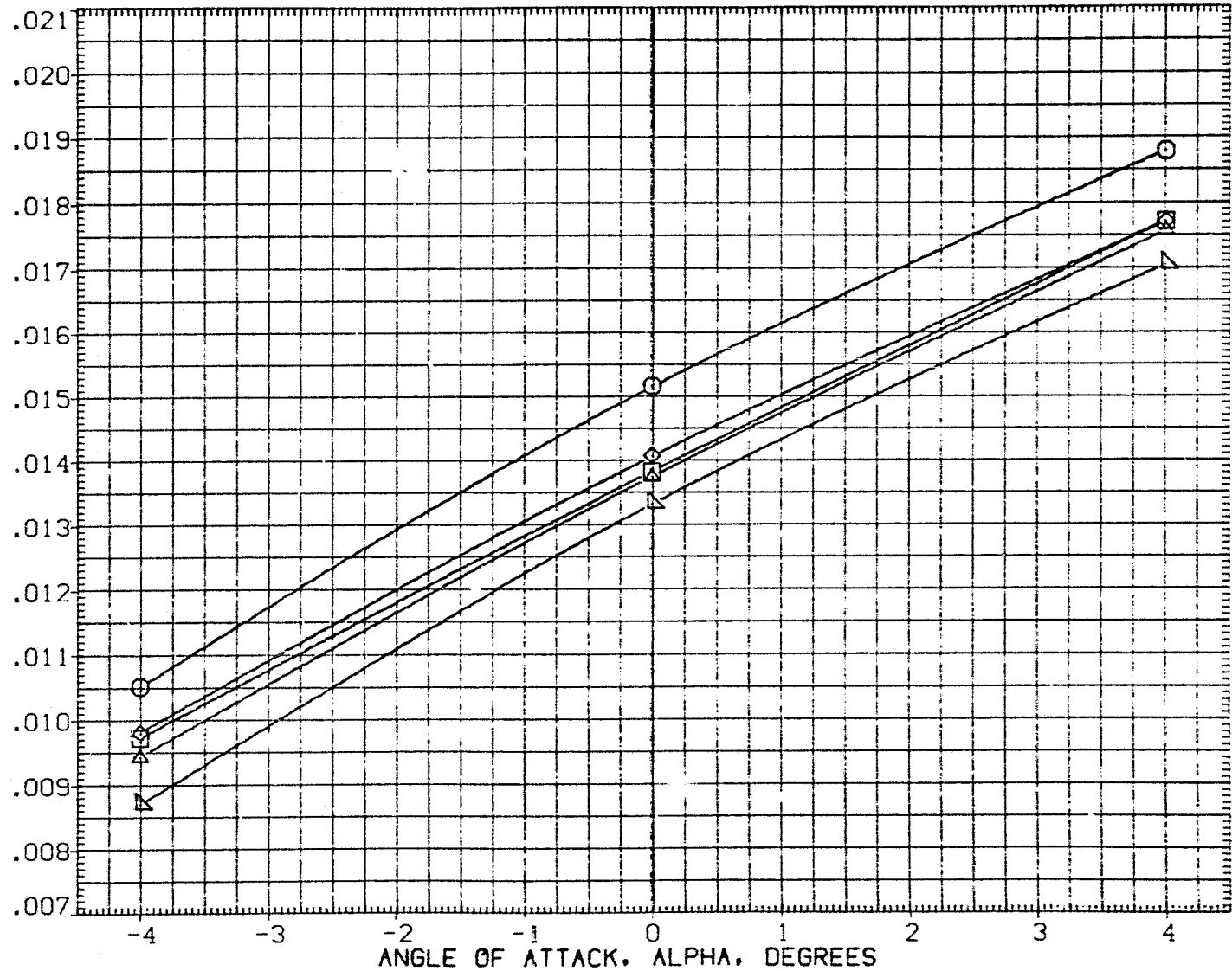


FIG. 76 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	YMRP	.0000 IN.
(RE4XB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	ZMRP	.0000 IN.
						SCALE	.0200

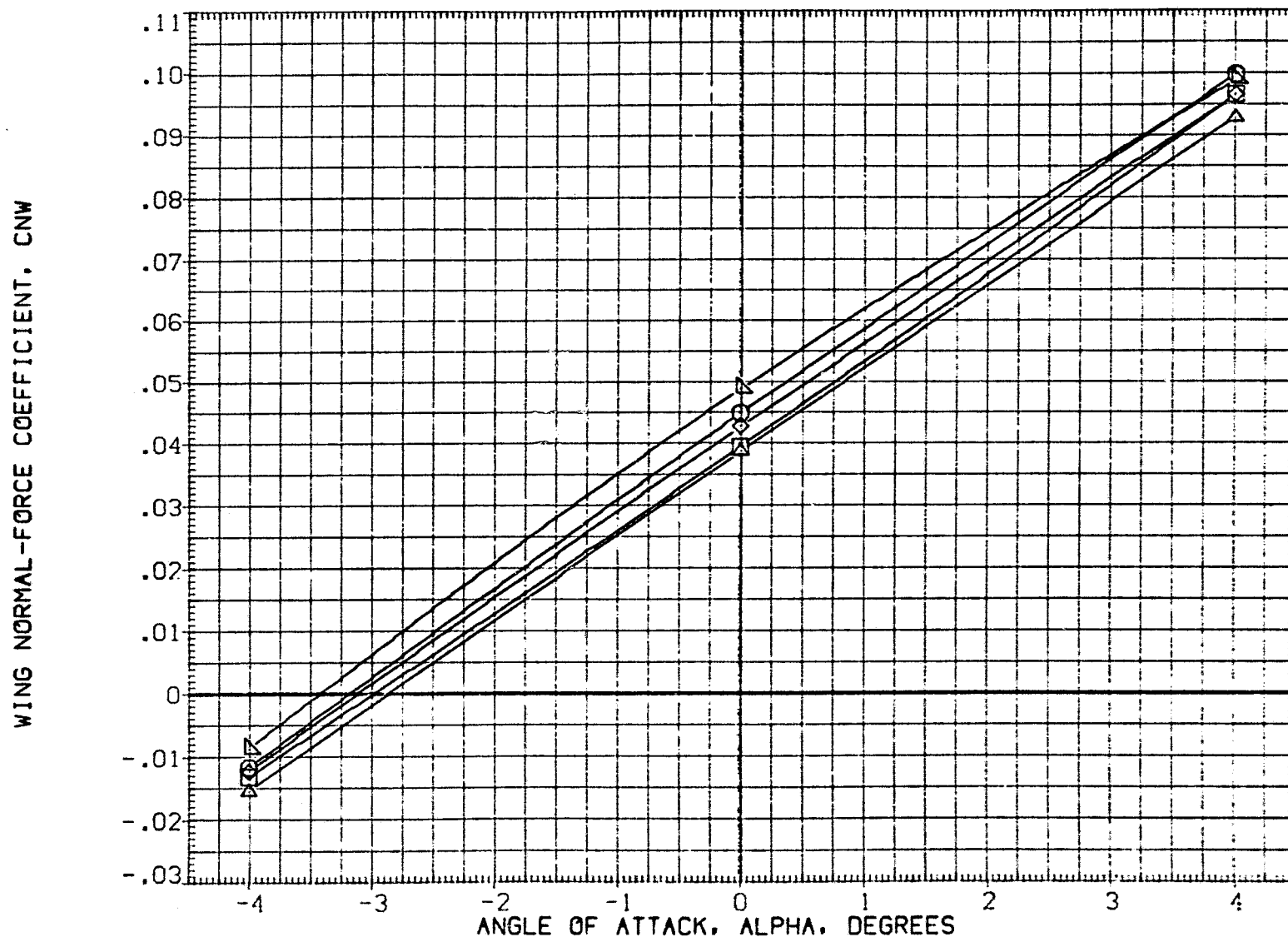


FIG. 76 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4XB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

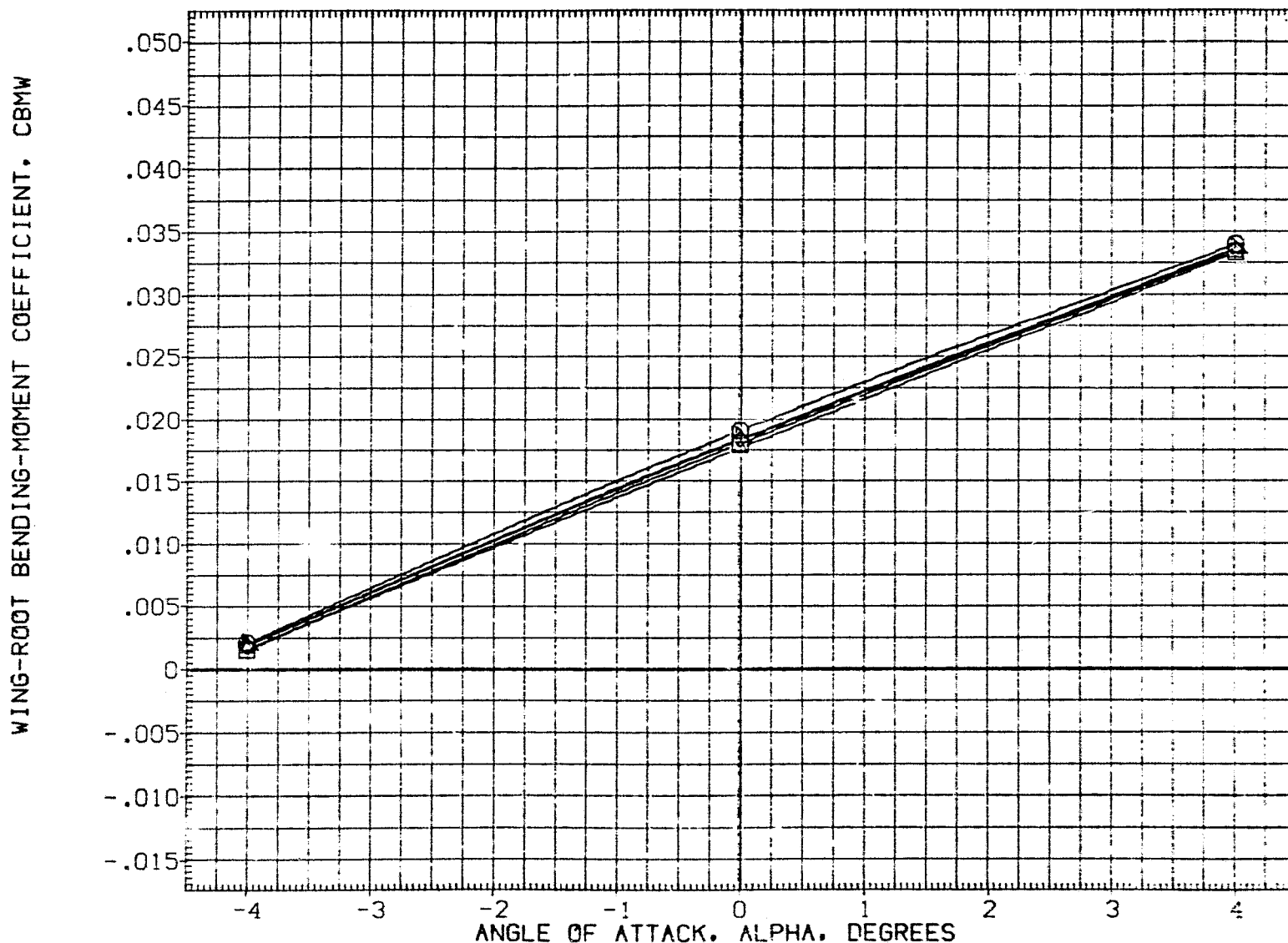


FIG. 77 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4X14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4XB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

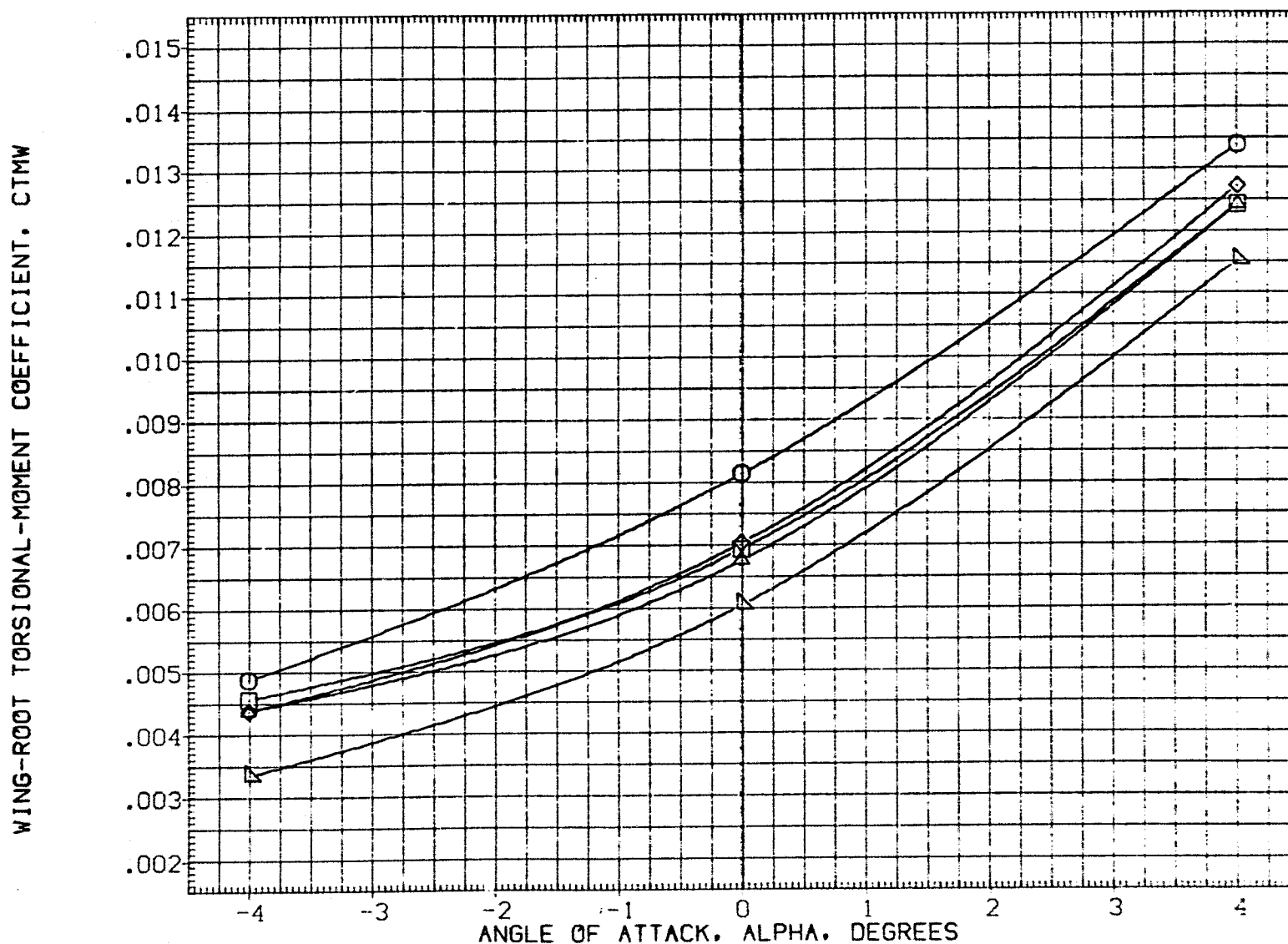


FIG. 77 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4X18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4X14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4XB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

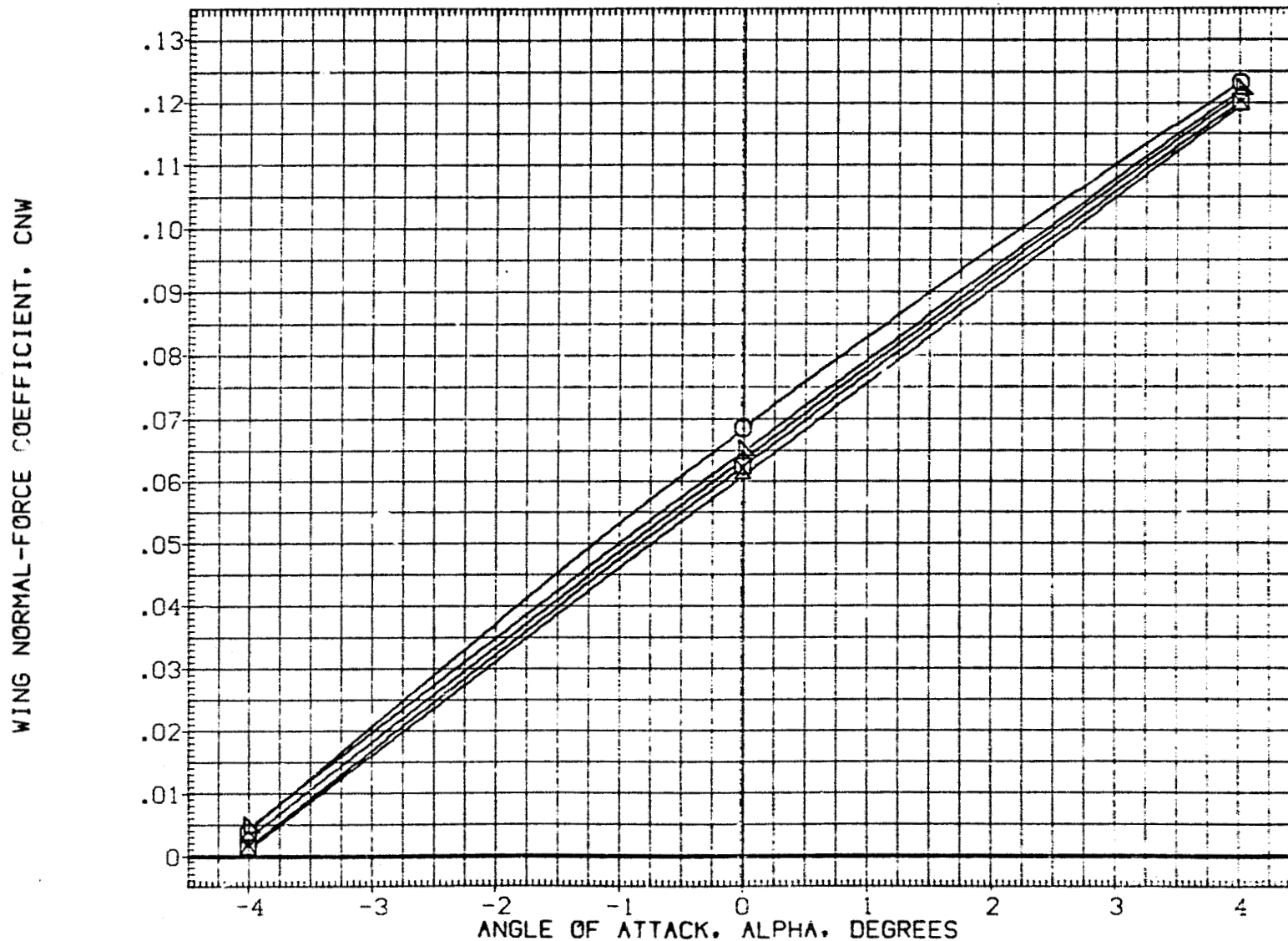


FIG. 77 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50. FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMPP	.0000	IN.
(RE4XB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMPP	.0000	IN.
						ZMPP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

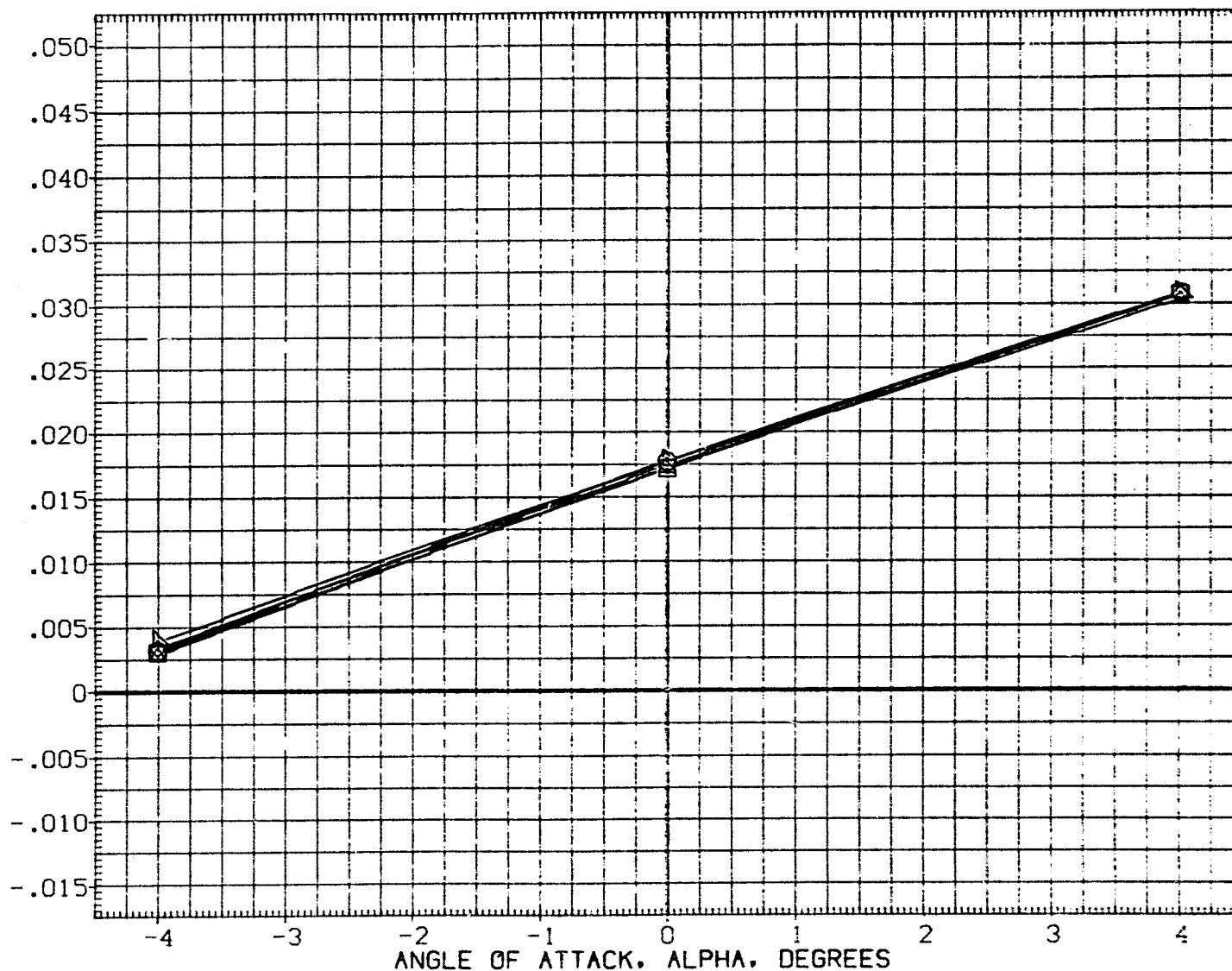


FIG. 78 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RV/L	REFERENCE INFORMATION
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF 2690.0000 SQ.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF 1290.3000 IN.
(RE4X19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF 1290.3000 IN.
(RE4X15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP .0000 IN.
(RE4XB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

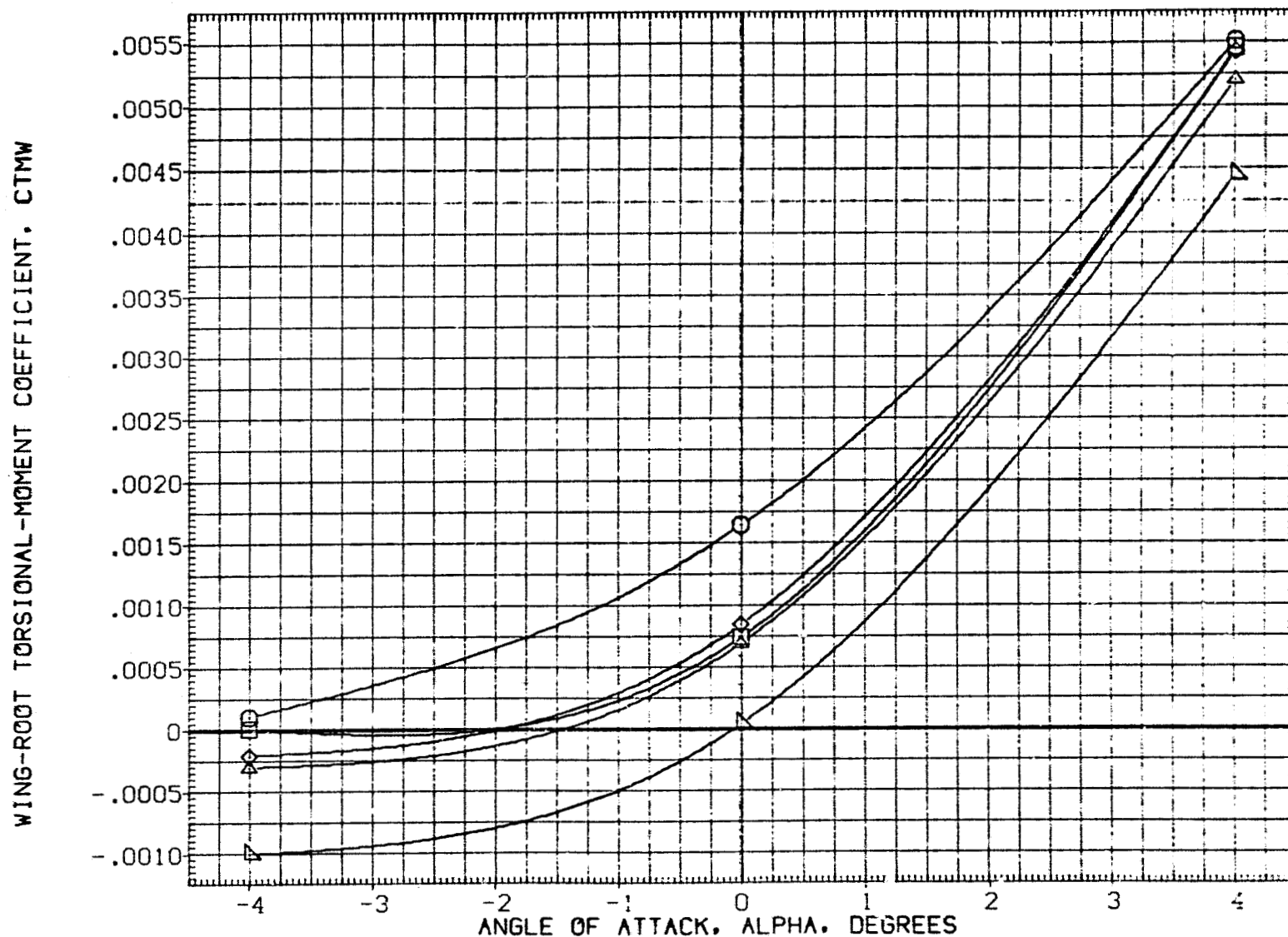


FIG. 78 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ. FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000 IN.
(RE4X19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000 IN.
(RE4X15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XM RP	.0000 IN.
(RE4X89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YM RP	.0000 IN.
						ZM RP	.0000 IN.
						SCALE	.0200

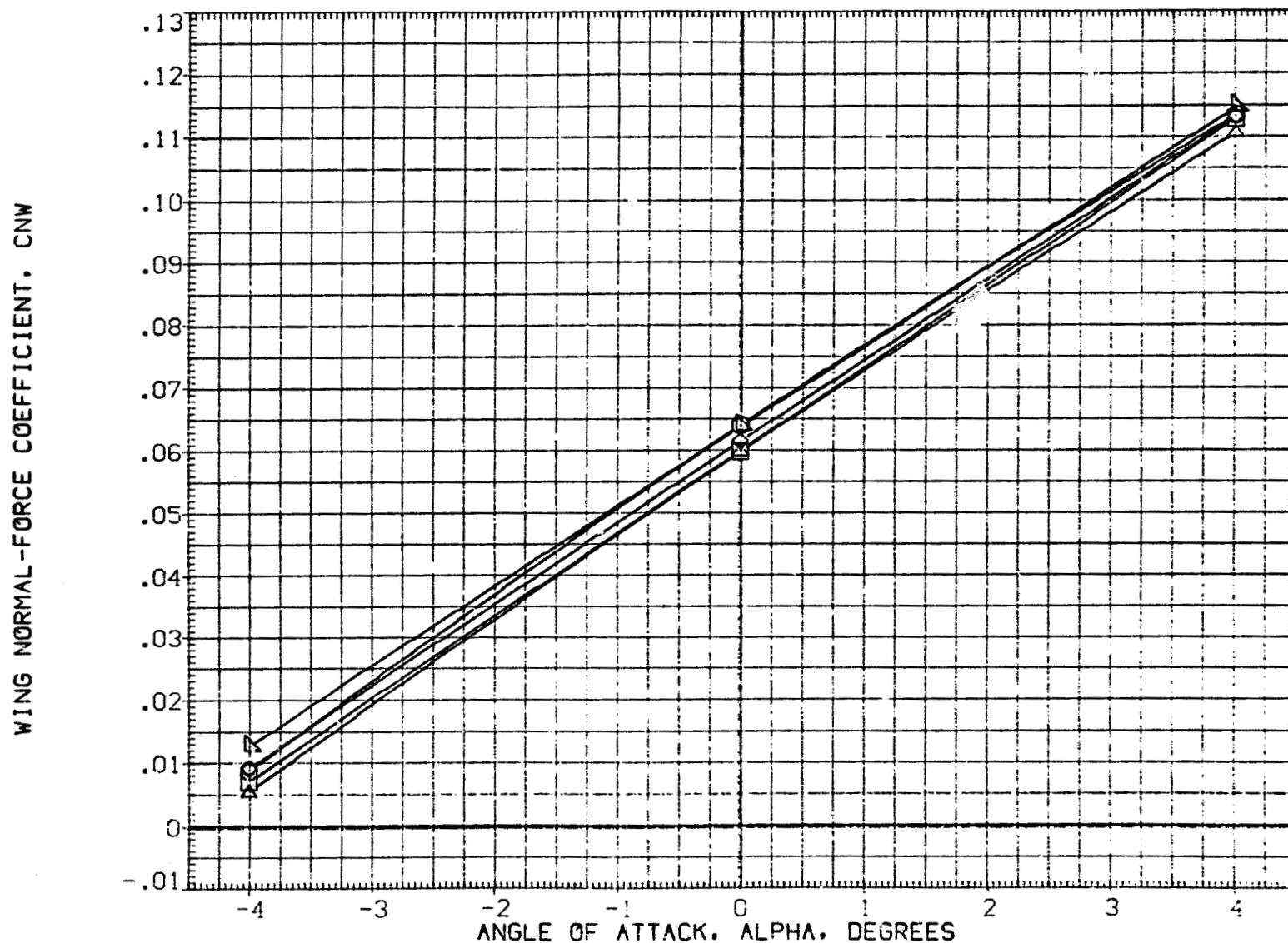


FIG. 78 EFFECT OF SSME PLUME SIZE ON WING LOAD IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-CD	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y20) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4Y11) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4Y85) △	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

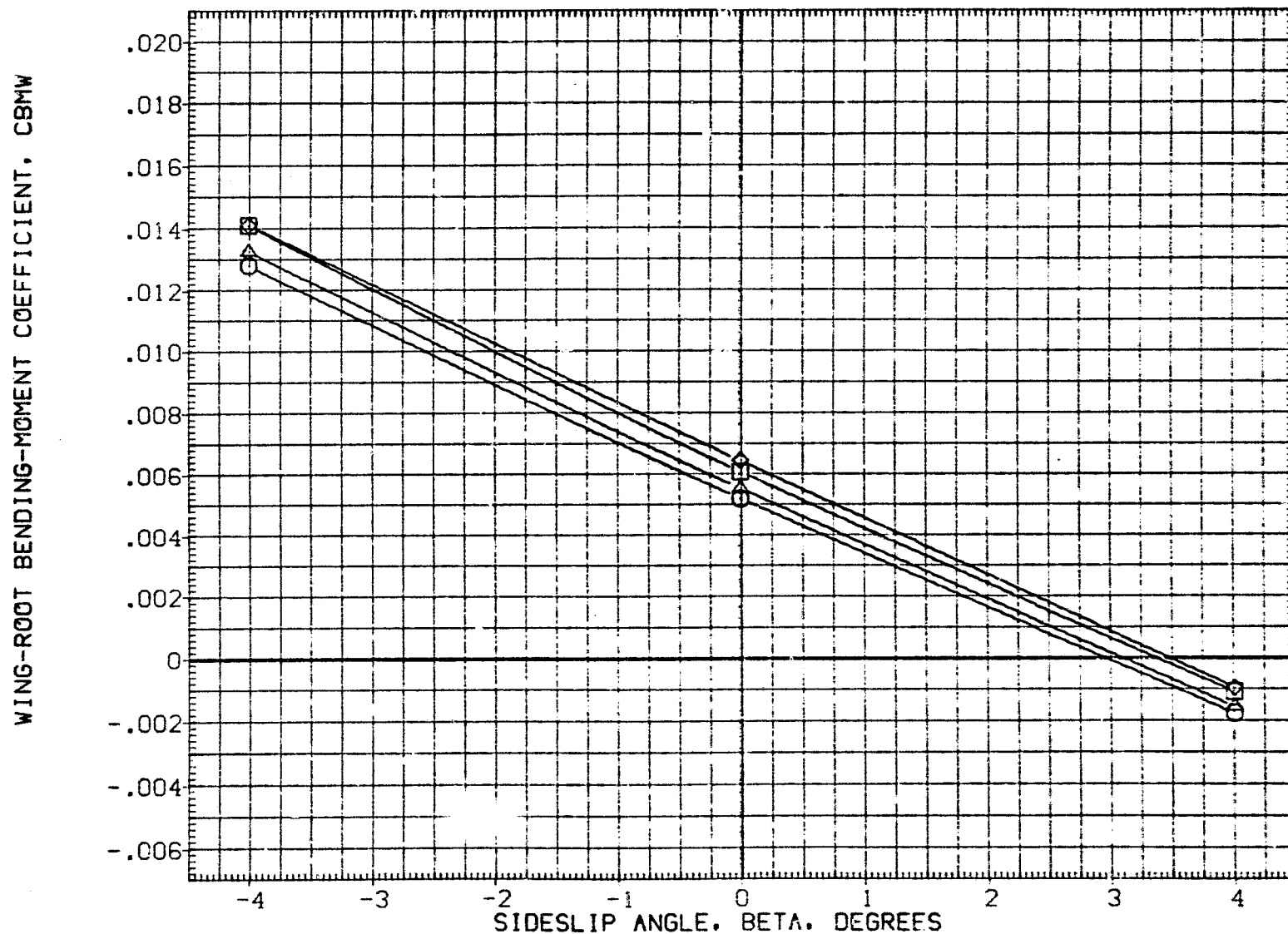


FIG. 79 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SPB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4YB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

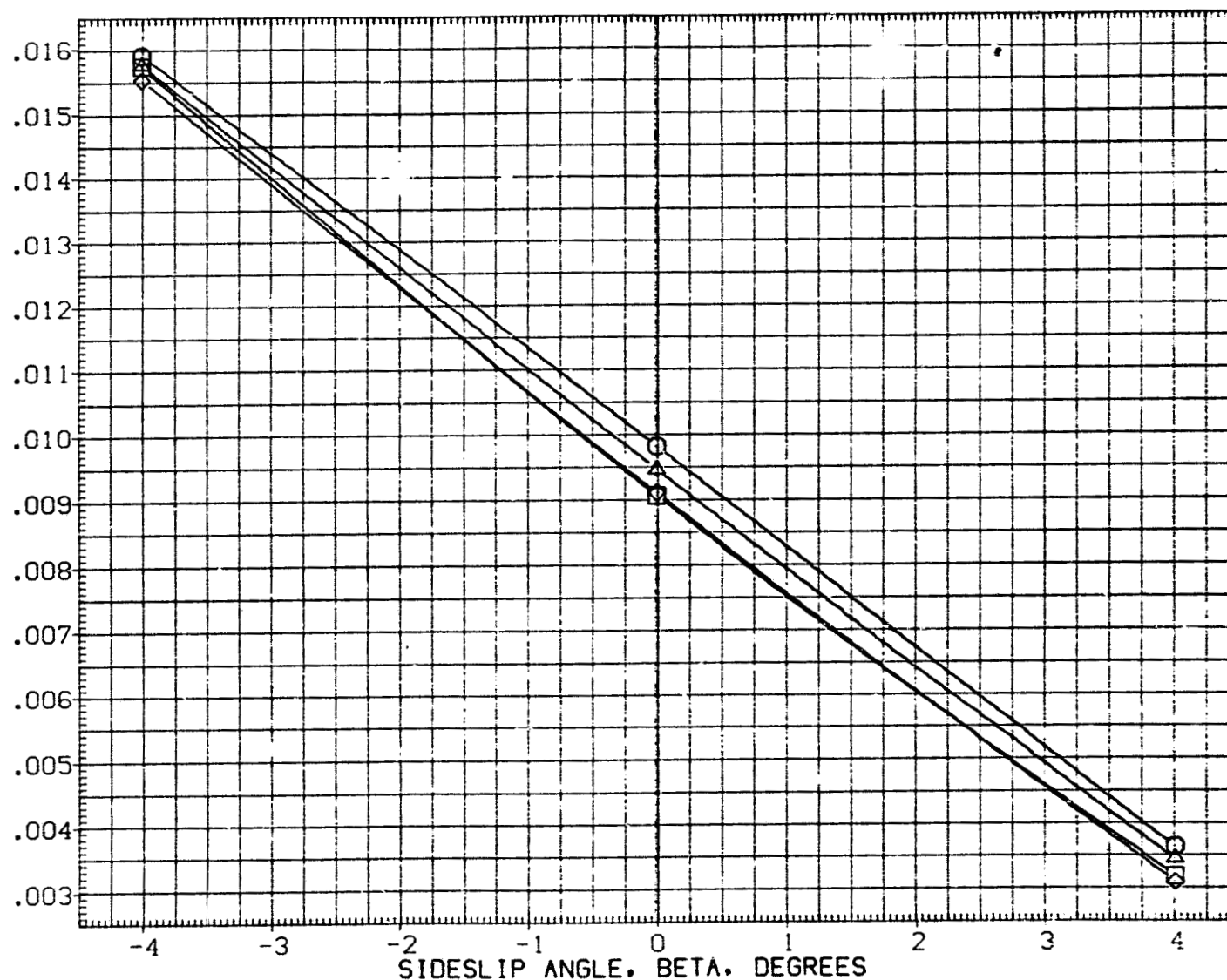


FIG. 79 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80	SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SG.FT.
(RE4Y20)	ARC 11-023 1A75	SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11)	ARC 11-023 1A60	SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4Y85)	ARC 11-023 1A80	SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

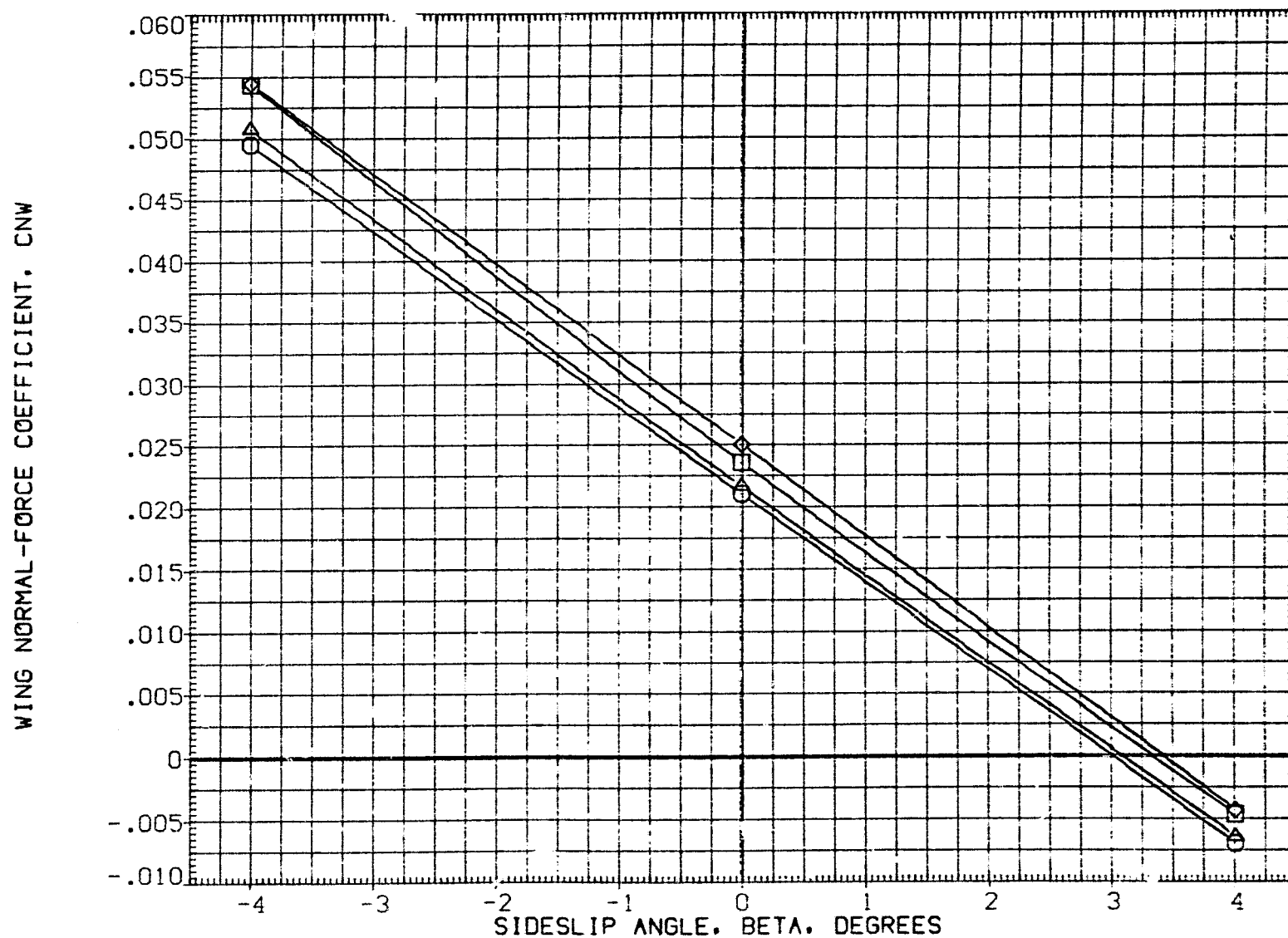


FIG. 79 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4Y12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4YB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

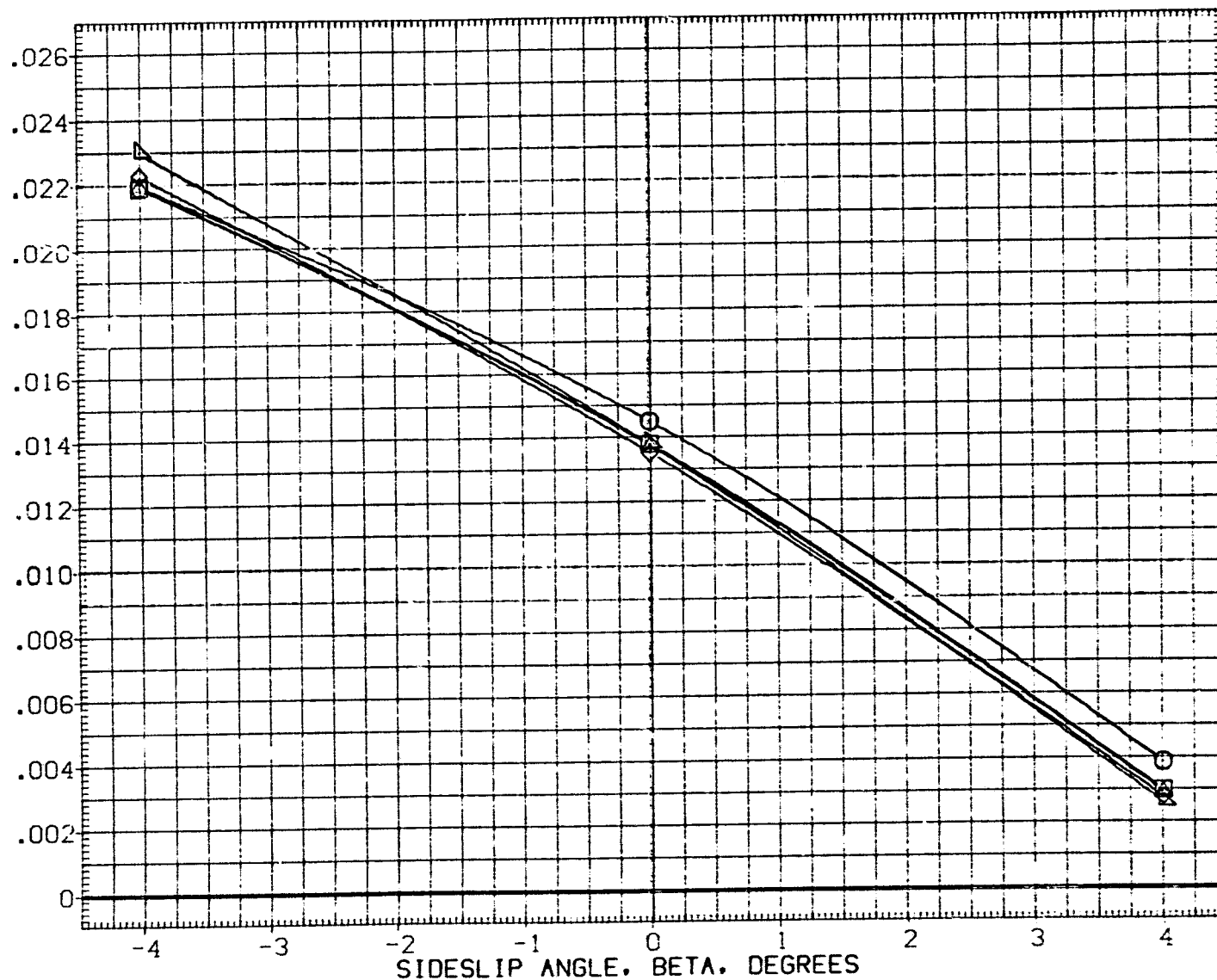


FIG. 80 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3030 IN.
(RE4Y16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3030 IN.
(RE4Y12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000 IN.
(RE4YB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

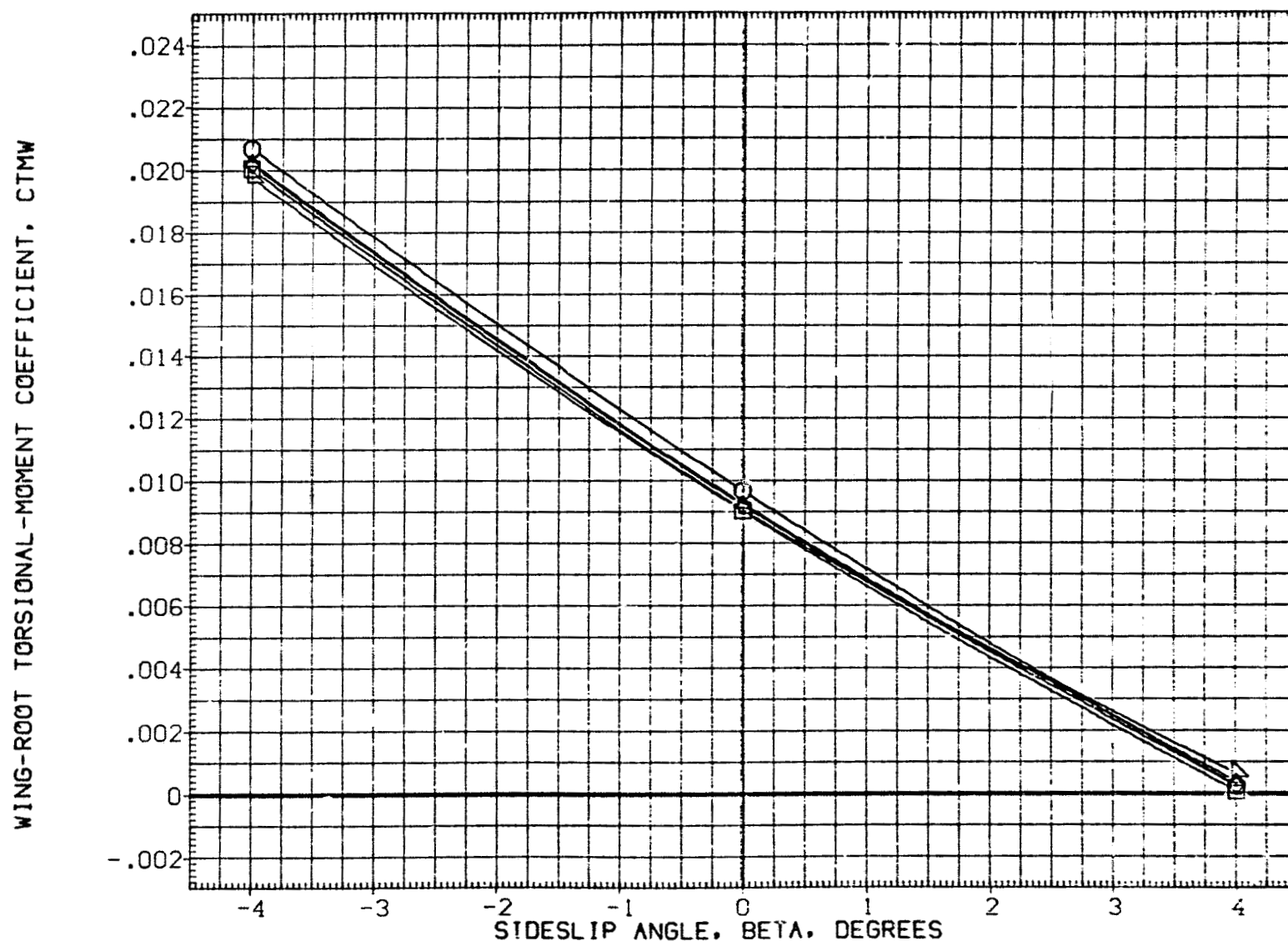


FIG. 80 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 DTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y21)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000 IN.
(RE4Y16)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000 IN.
(RE4Y12)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000 IN.
(RE4YB6)	ARC 11-023 1A80 DTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

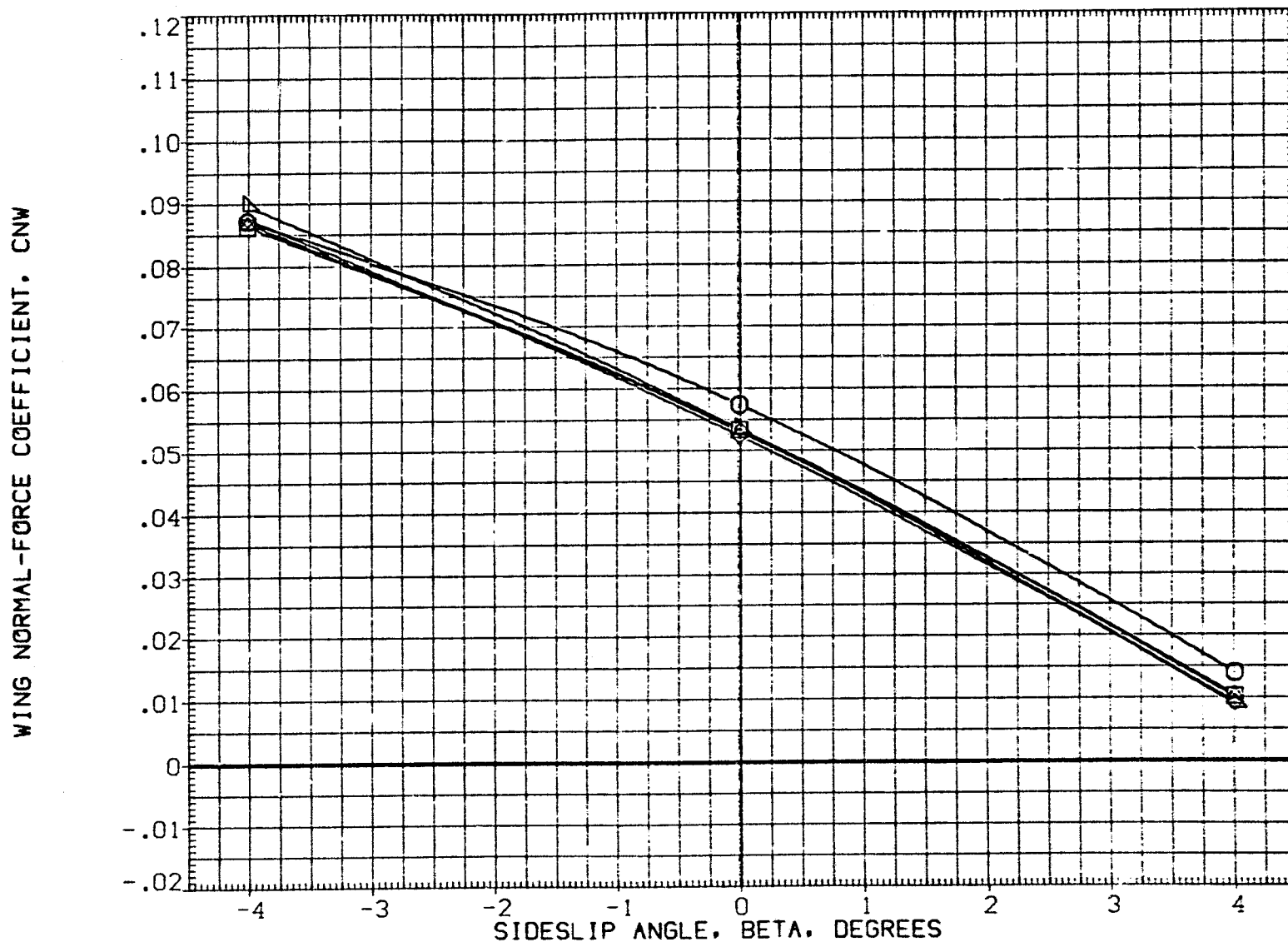


FIG. 80 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=0.9

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

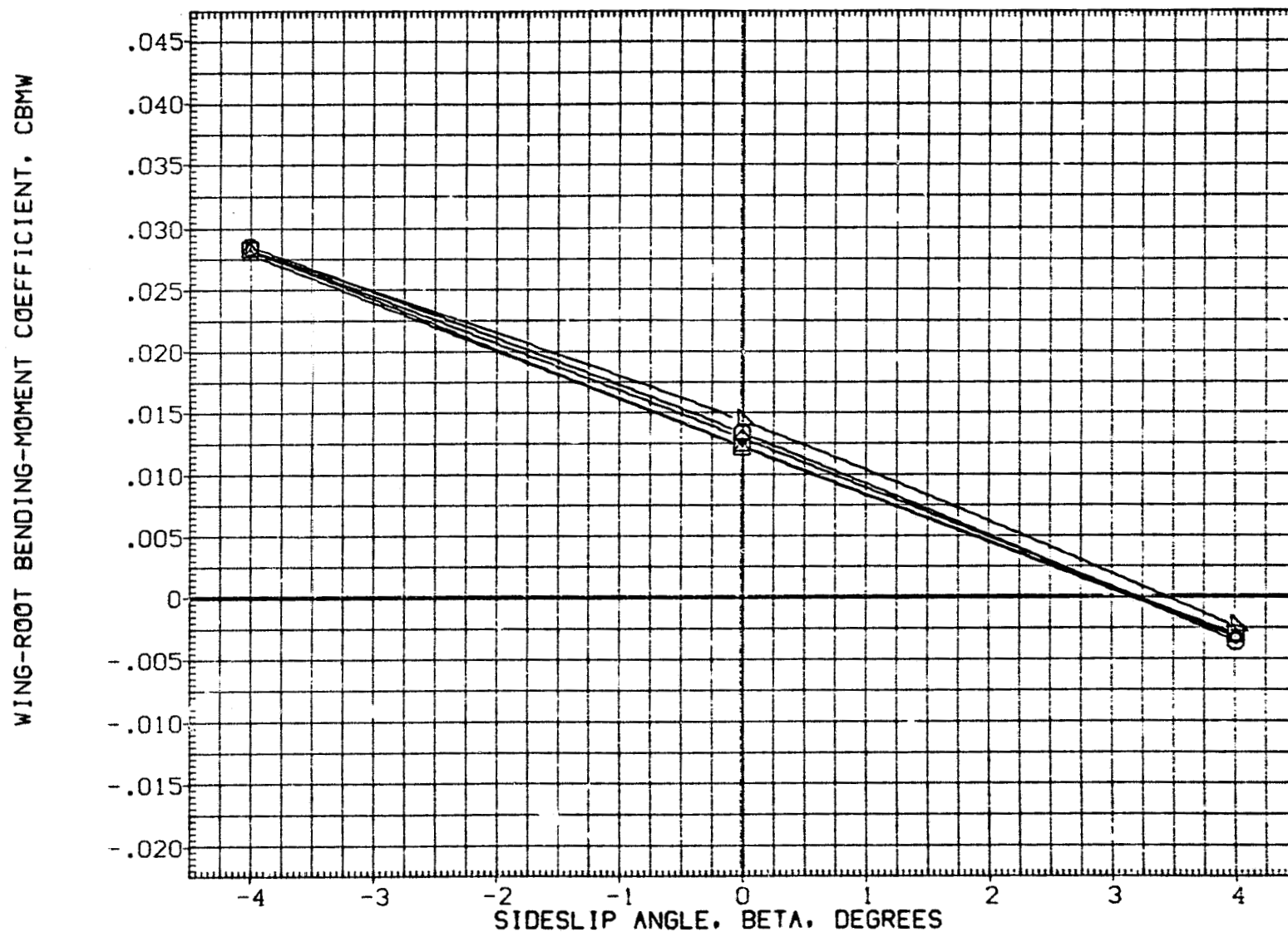


FIG. 81 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0b	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

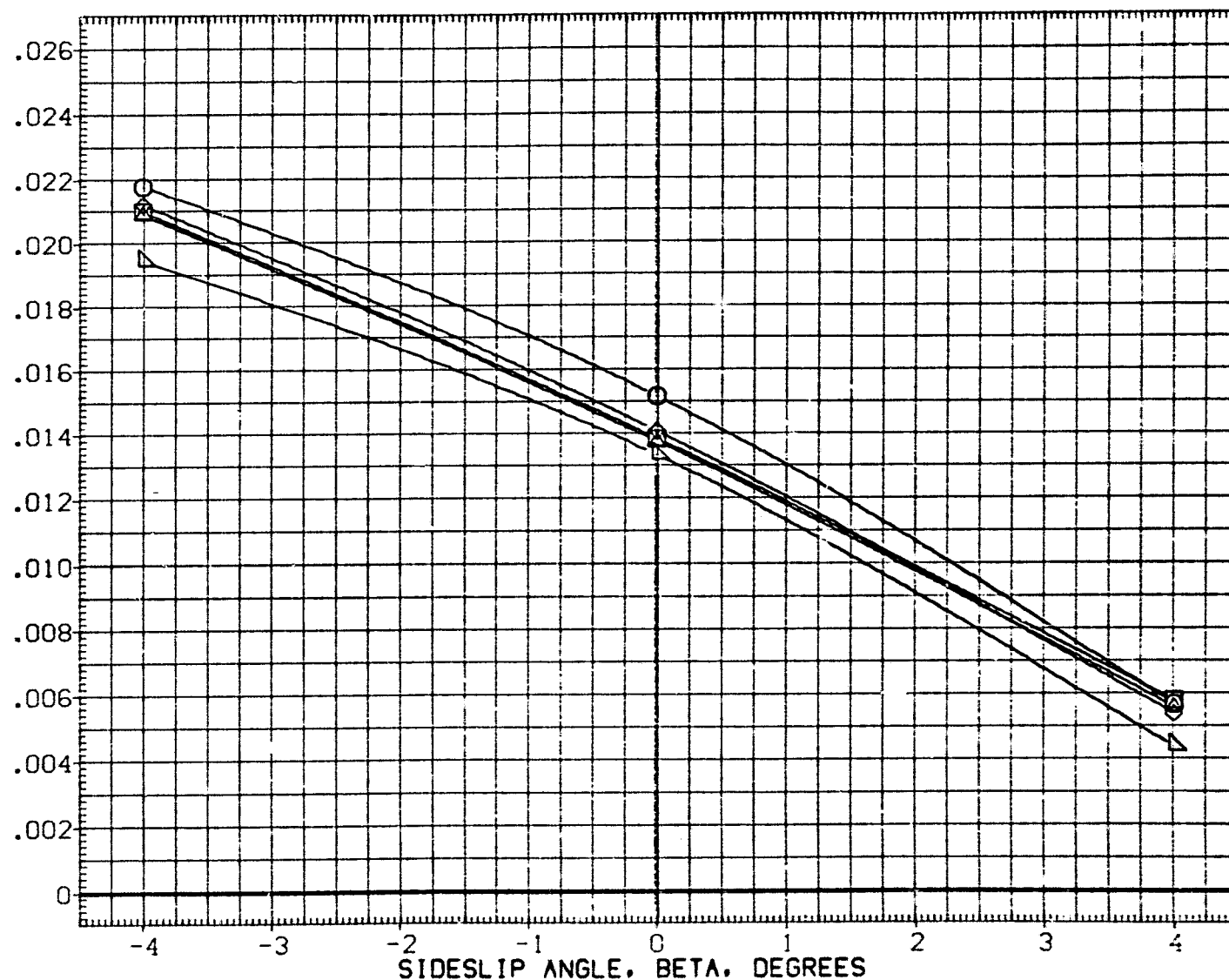


FIG. 81 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.1

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000 IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000 IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000 IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

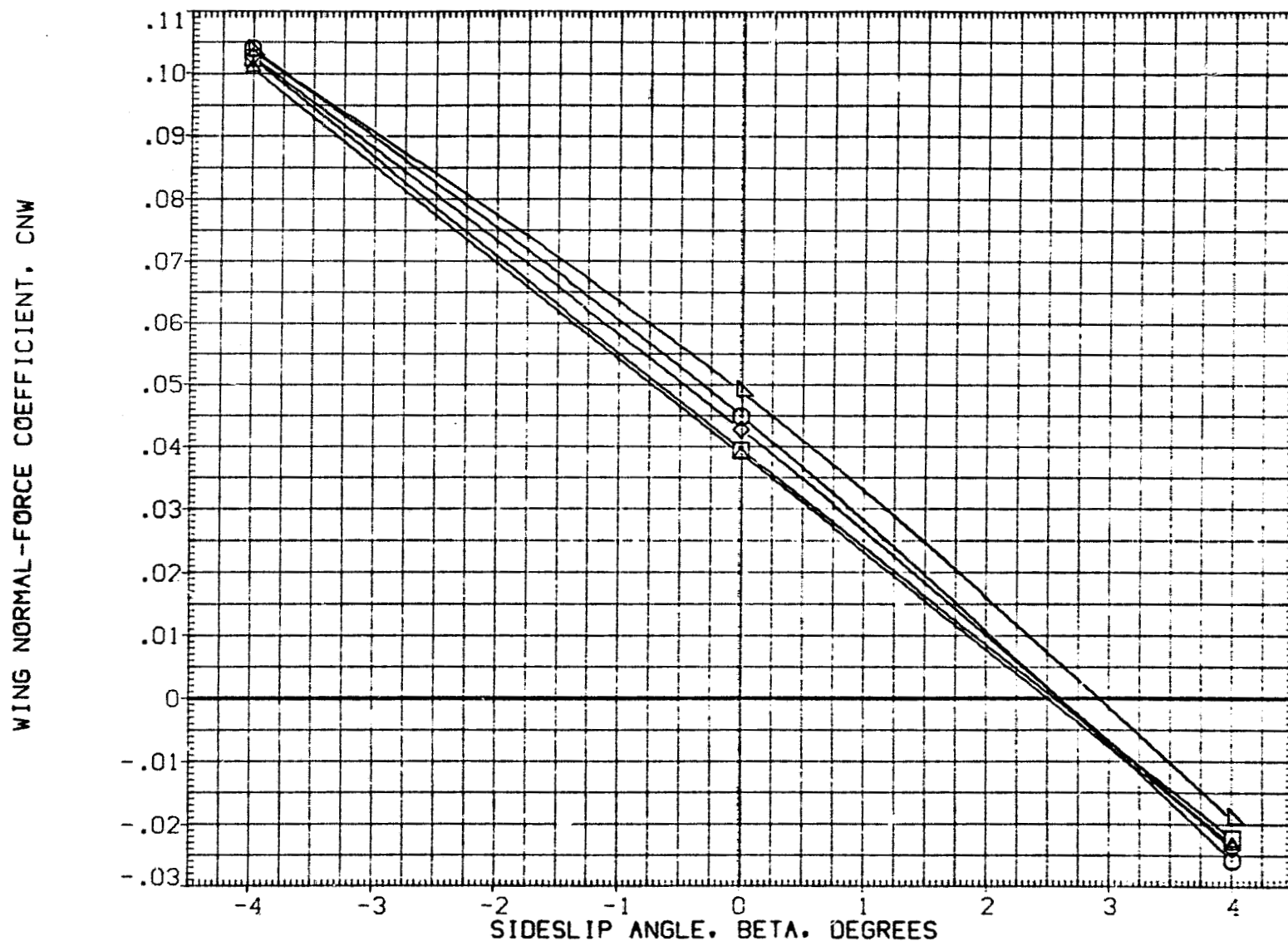


FIG. 81 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

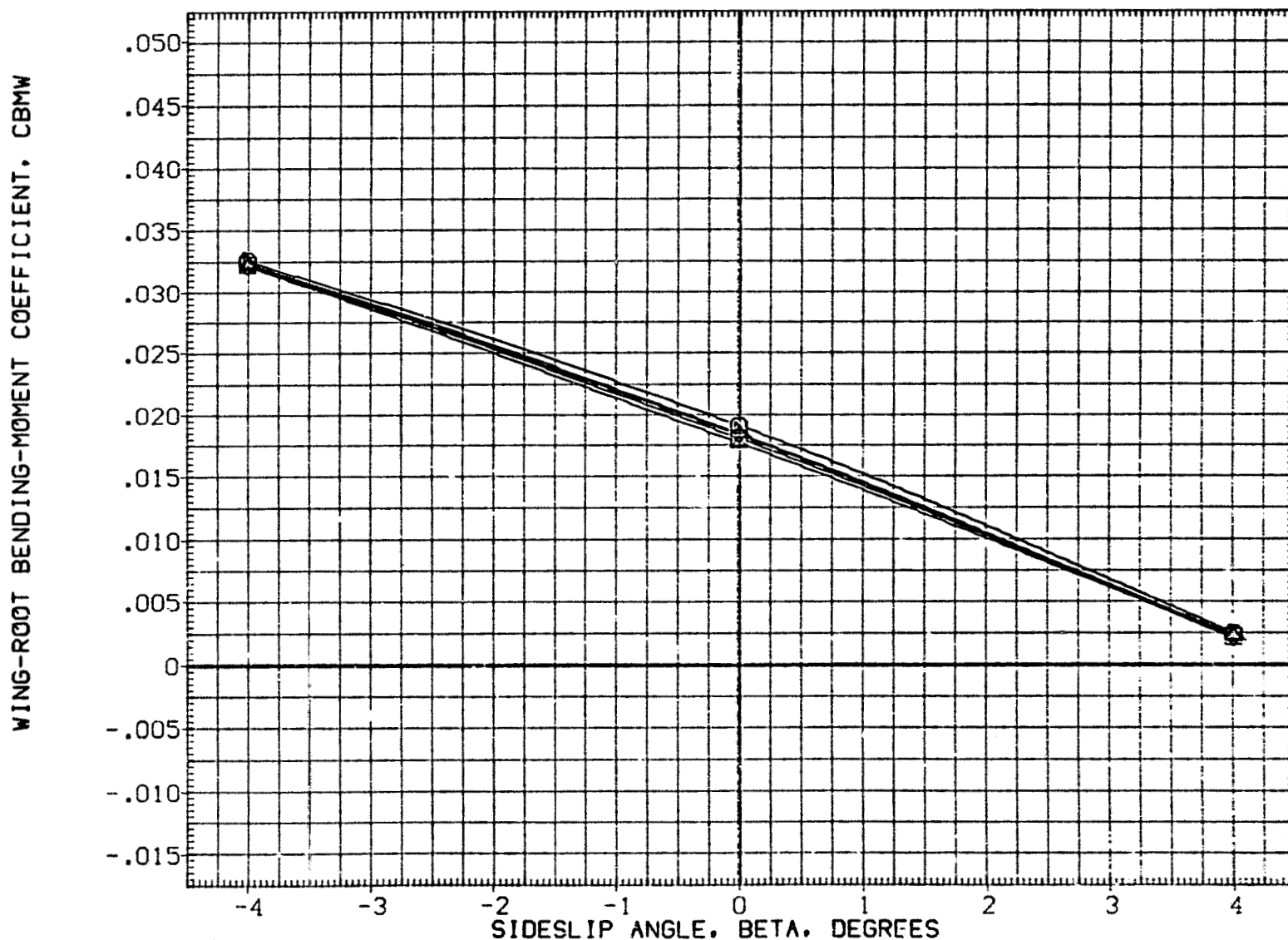


FIG. 82 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4YB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

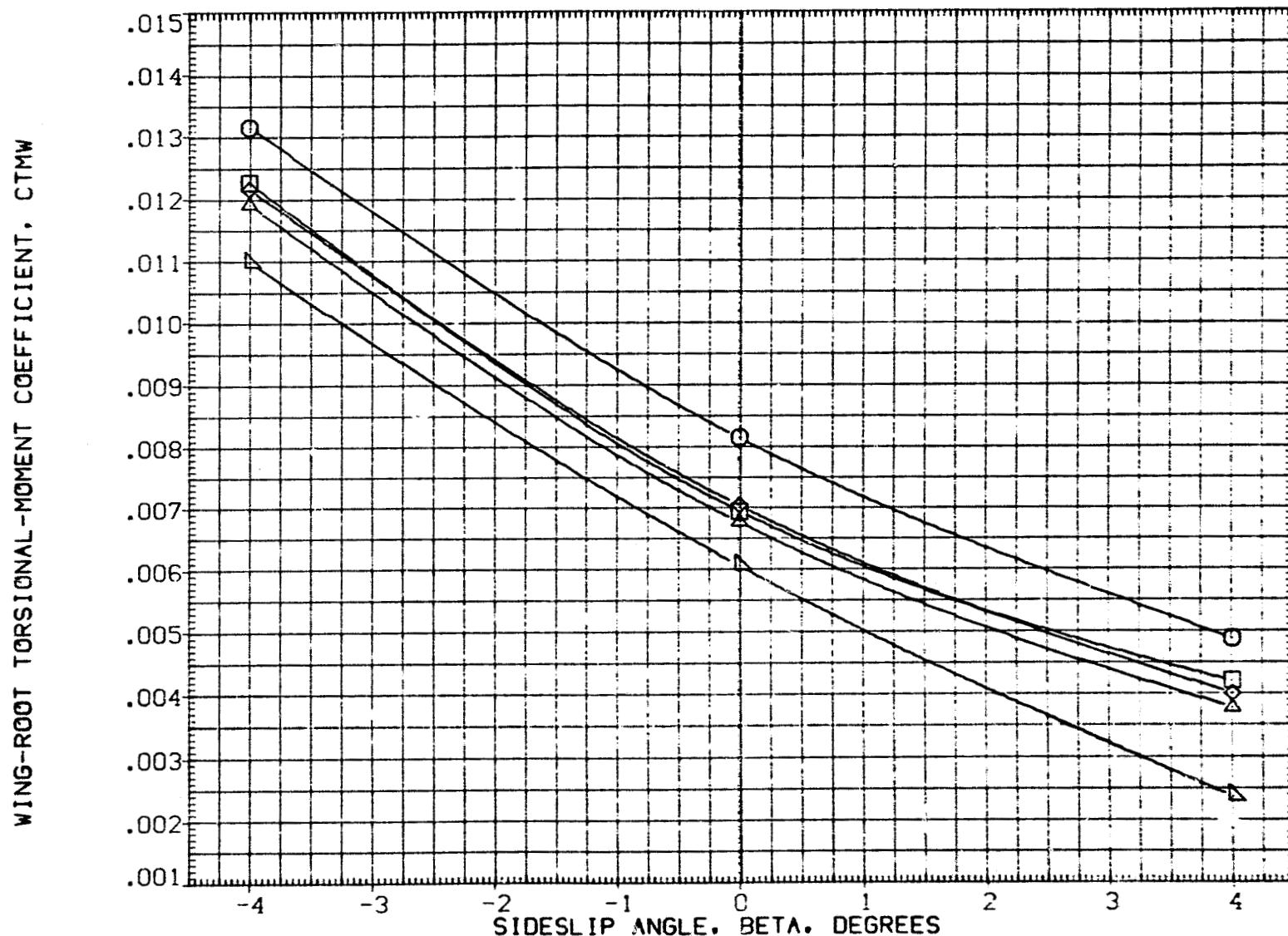


FIG. 82 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1ABU OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SC.FT.
(RE4Y23)	ARC 11-023 1ABD OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y18)	ARC 11-023 1ABD OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y14)	ARC 11-023 1ABD OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	AMRP	.0000	IN.
(RE4YB8)	ARC 11-023 1ABD OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRF	.0000	IN.
						ZMRF	.0000	IN.
						SCALE	.0200	

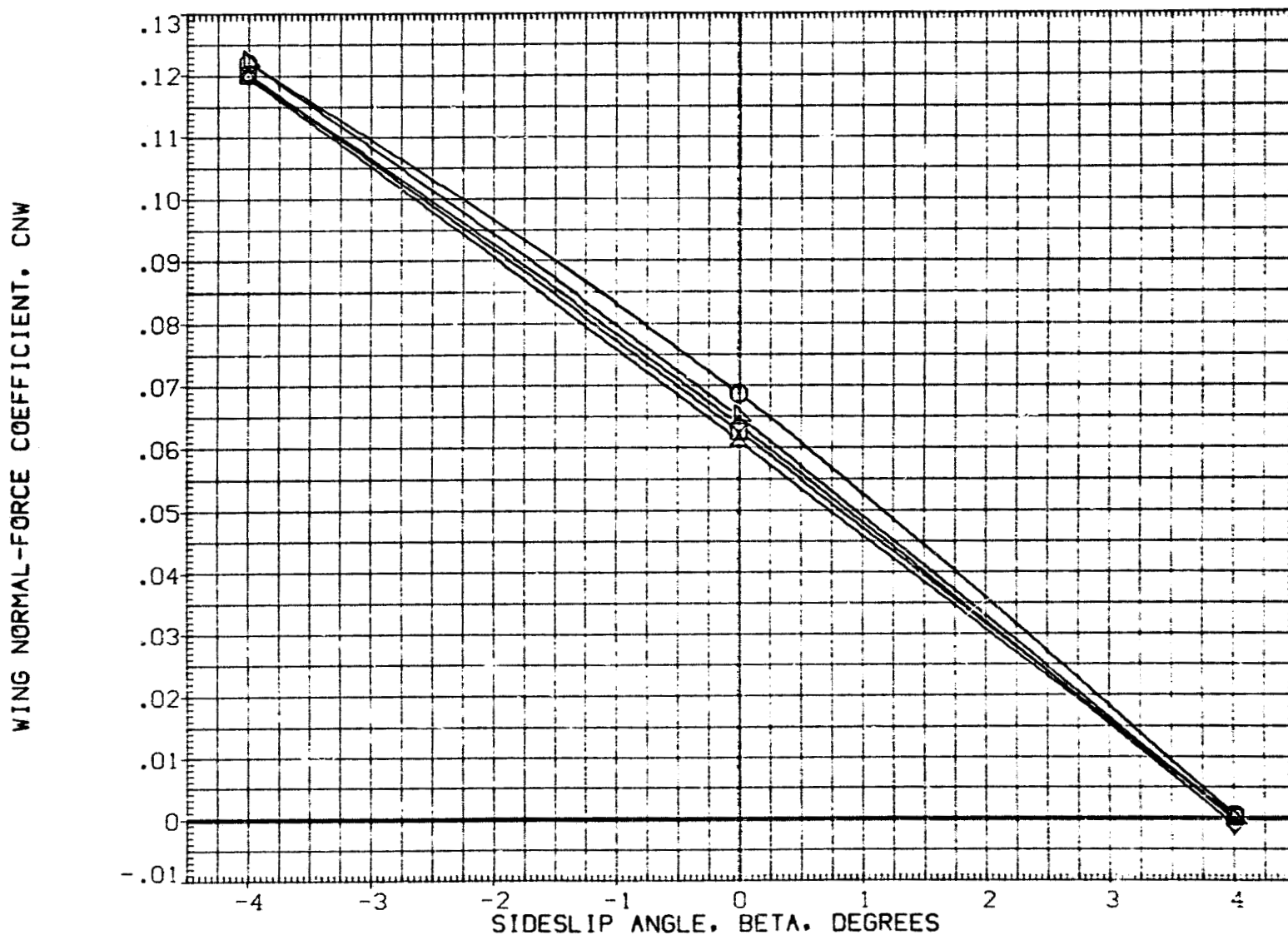


FIG. 82 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.25
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SR3 OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000 IN.
(RE4YB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

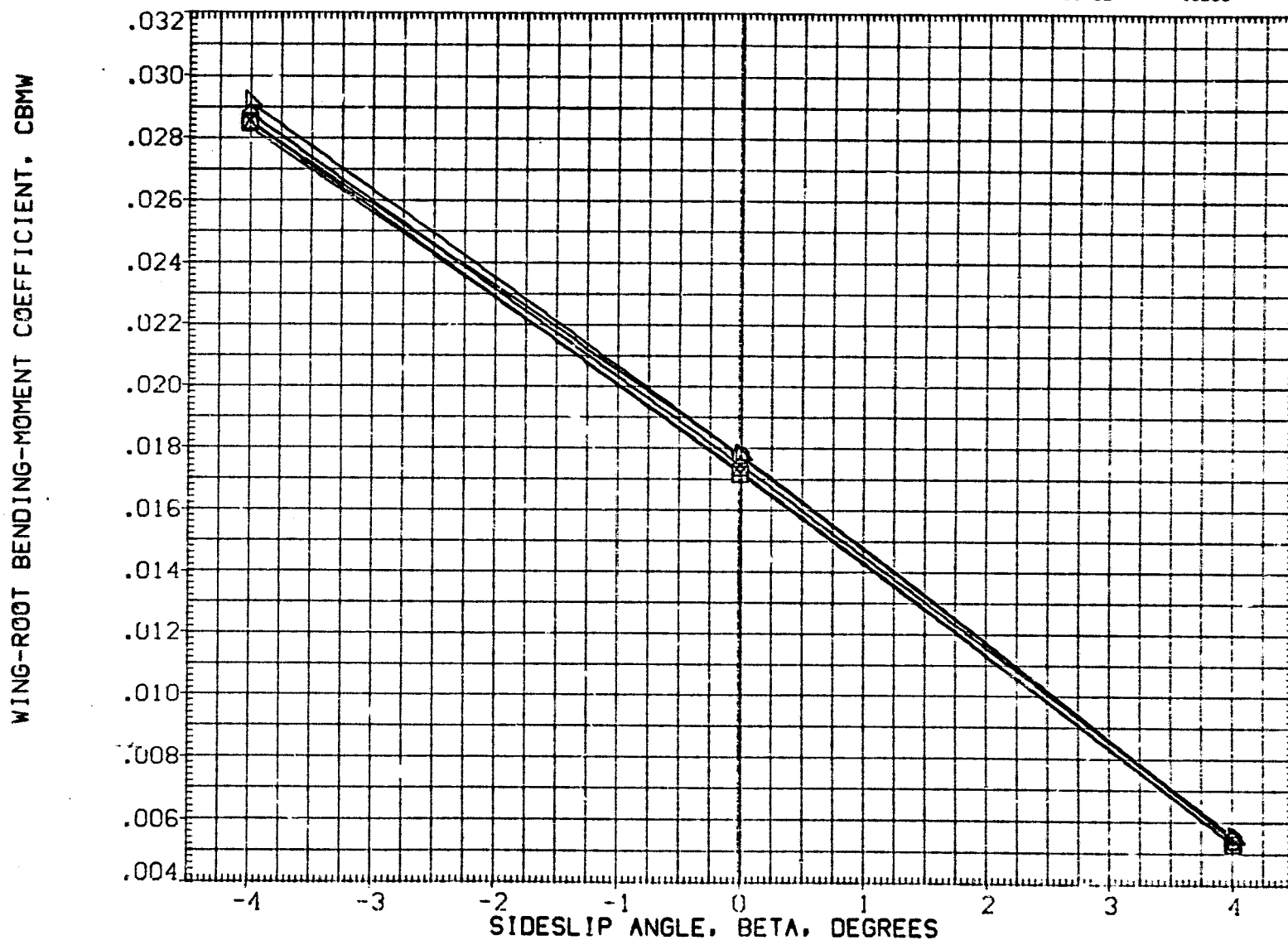


FIG. 83 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.4

TAJALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4YB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	0200	

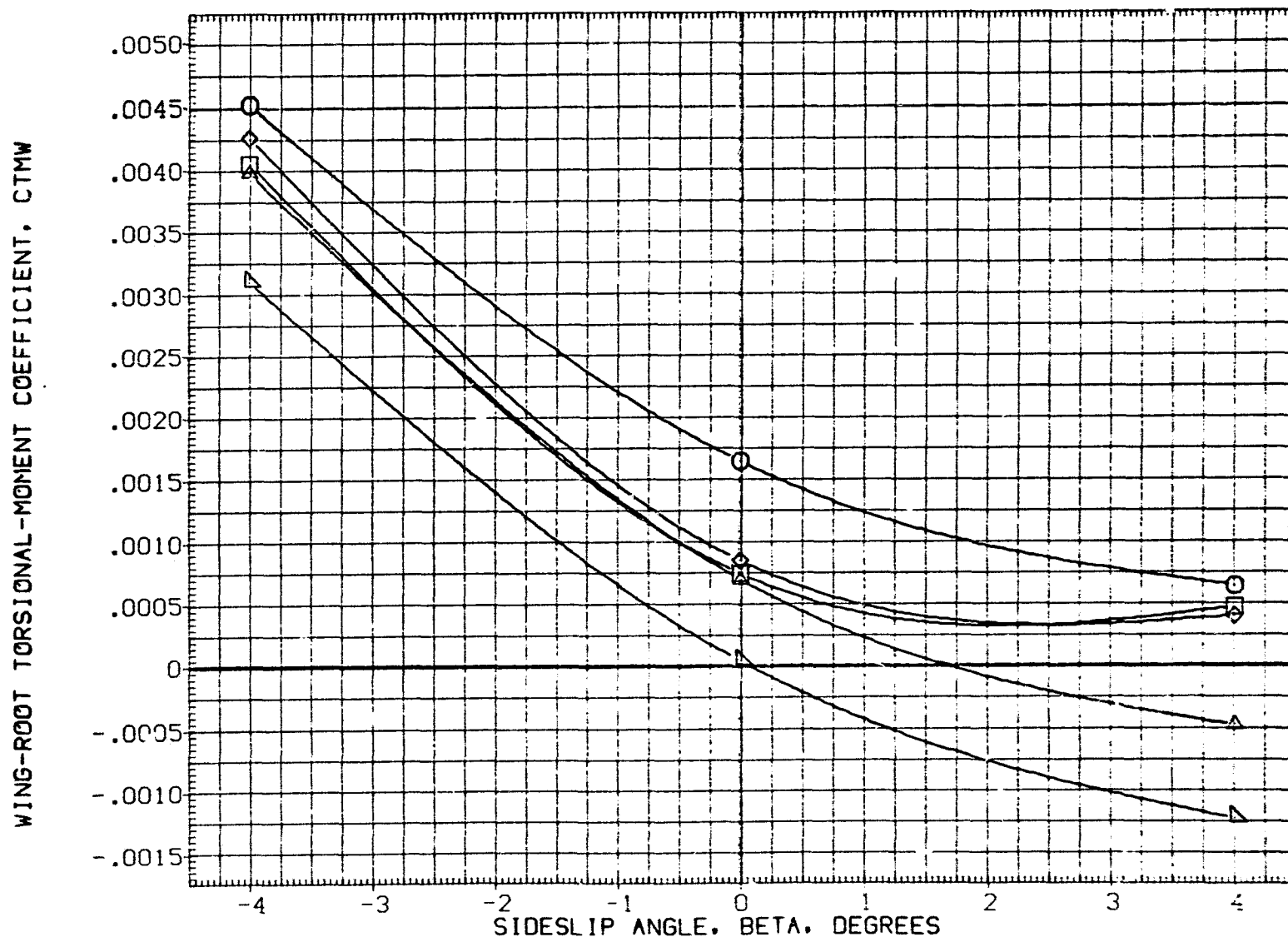


FIG. 83 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y24)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000 IN.
(RE4Y19)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000 IN.
(RE4Y15)	×	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000 IN.
(RE4YB9)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000 IN.
							ZMRP	.0000 IN.
							SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

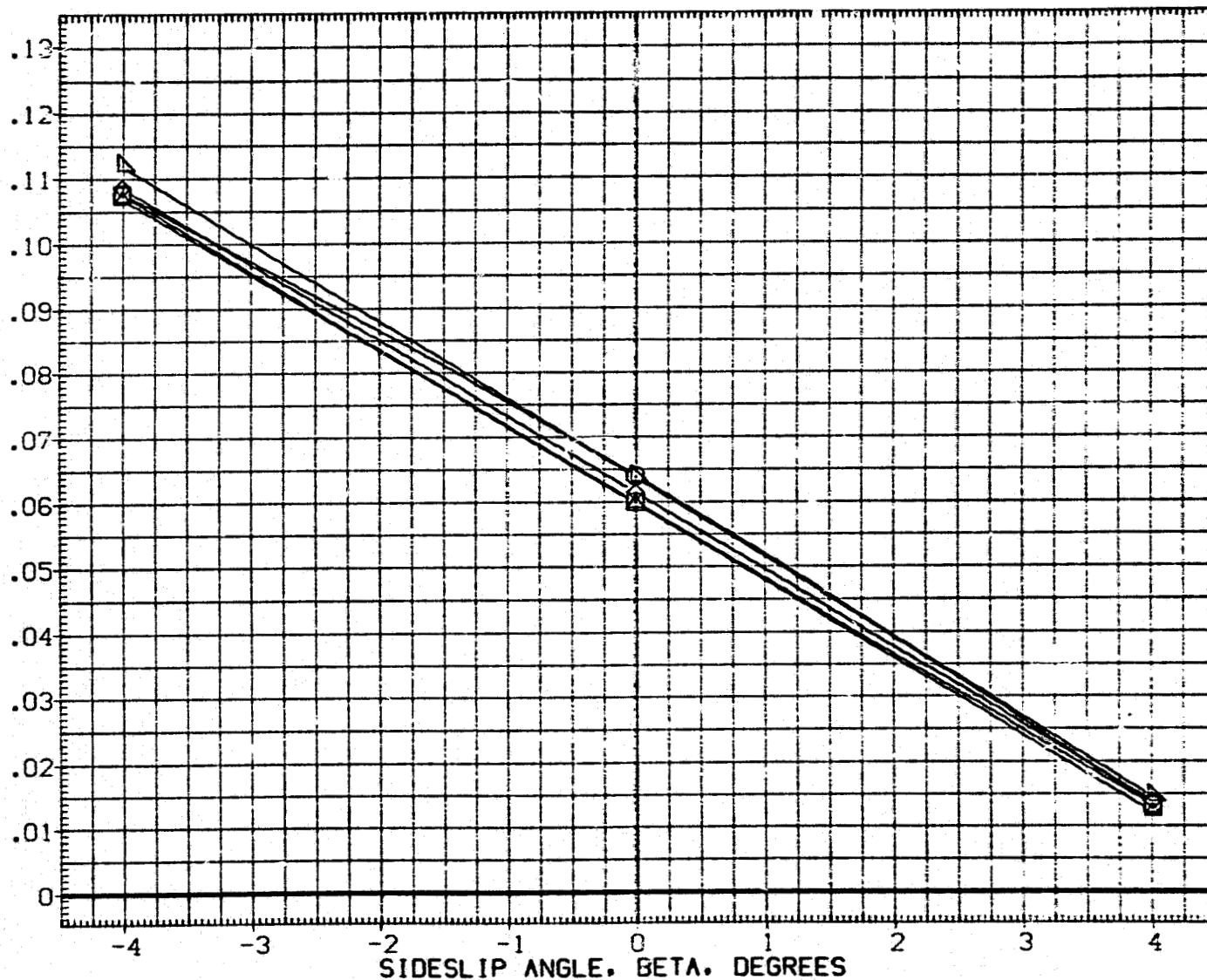


FIG. 83 EFFECT OF SSME PLUME SIZE ON WING LOAD IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4X11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4XB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	ZMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

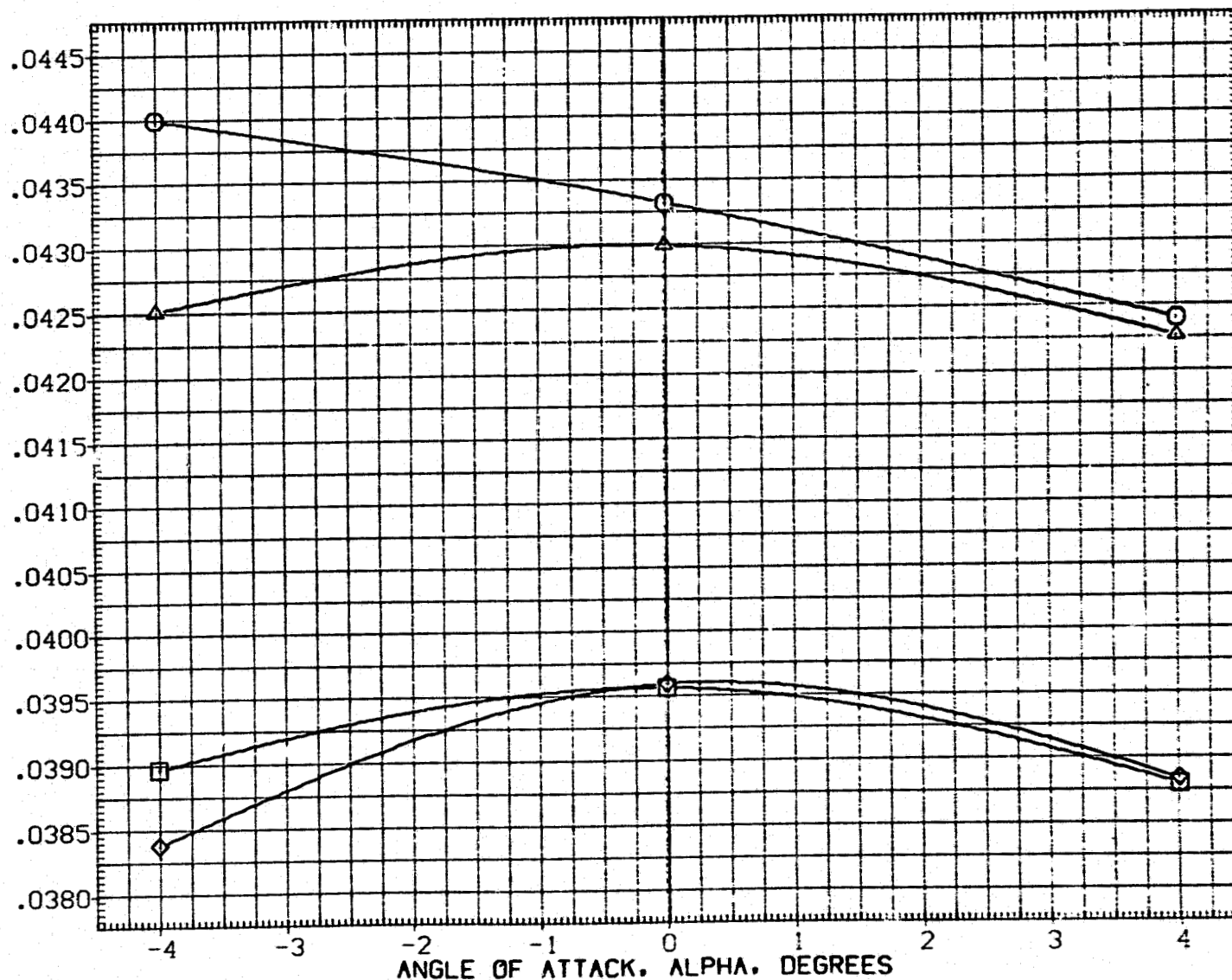


FIG. 84 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN. L	REFERENCE INFORMATION	
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000 IN.
(RE4X11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000 IN.
(RE4XB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

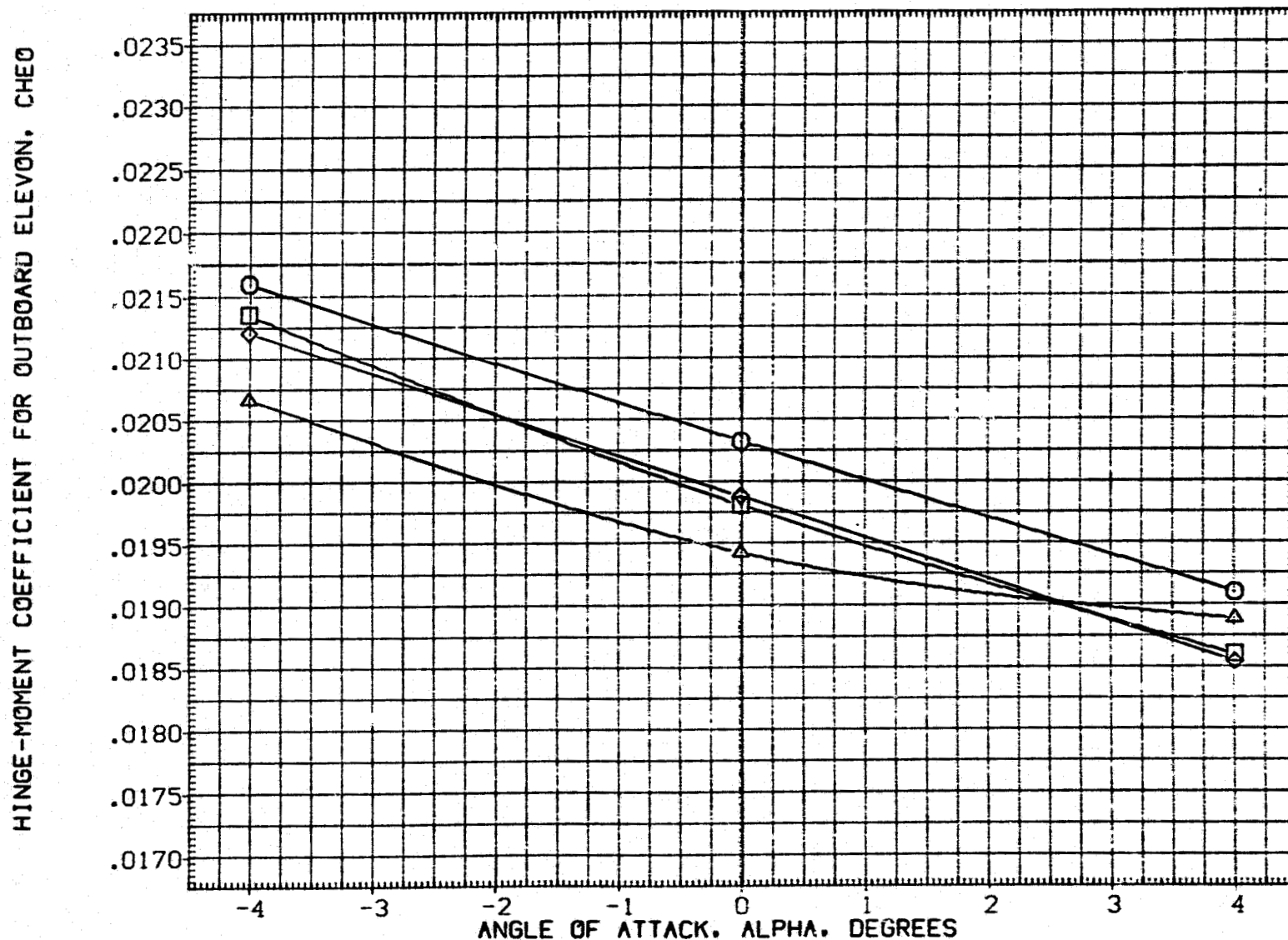


FIG. 84 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.6

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4X16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF	1290.3000	IN.
(RE4X12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRF	.0000	IN.
(RE4XB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRF	.0000	IN.
						ZMRF	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

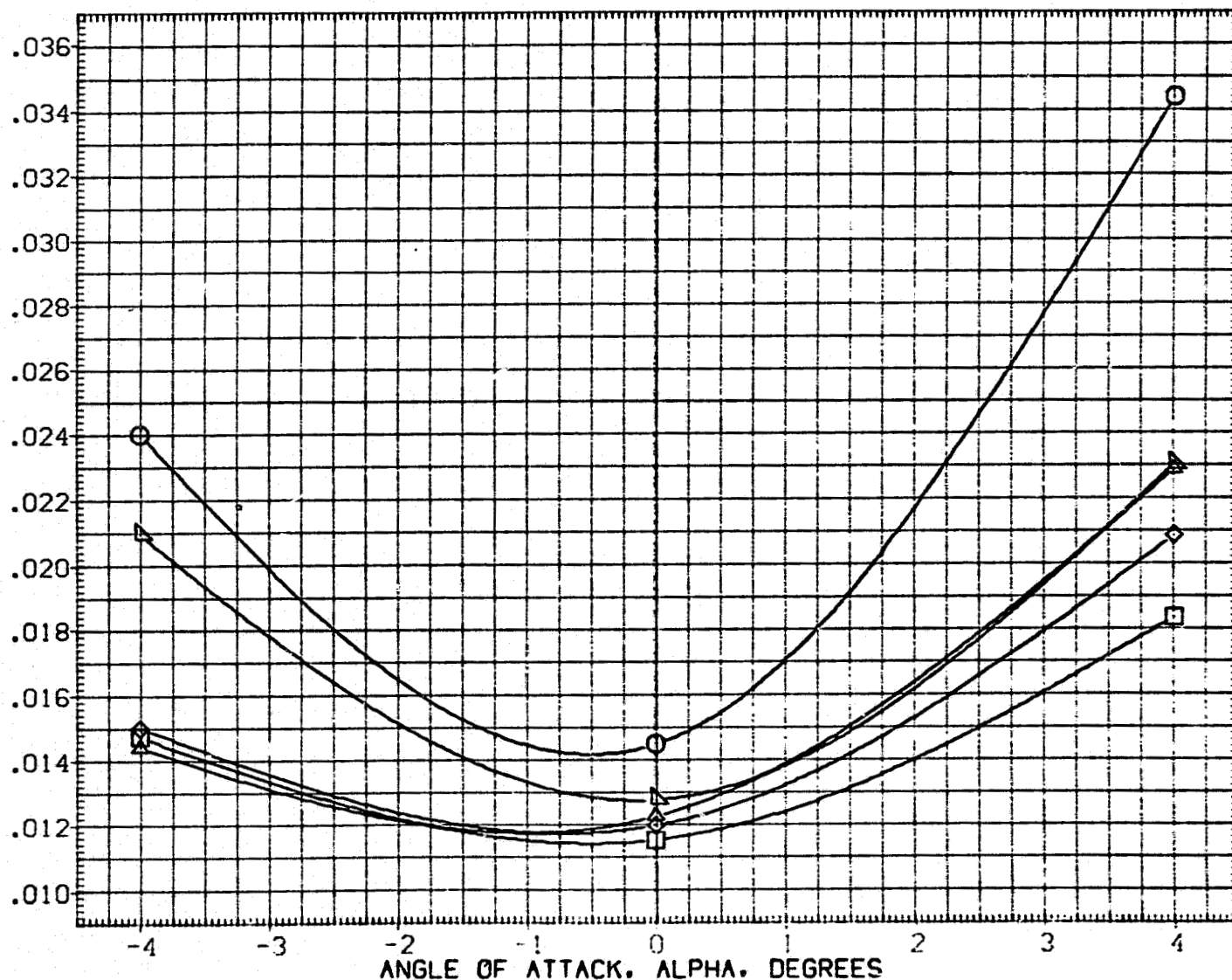


FIG. 85 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.9
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF 2690.0000 SQ.FT.
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	1.250	LREF 1290.3000 IN.
(RE4X16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF 1290.3000 IN.
(RE4X12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP .0000 IN.
(RE4XB6)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

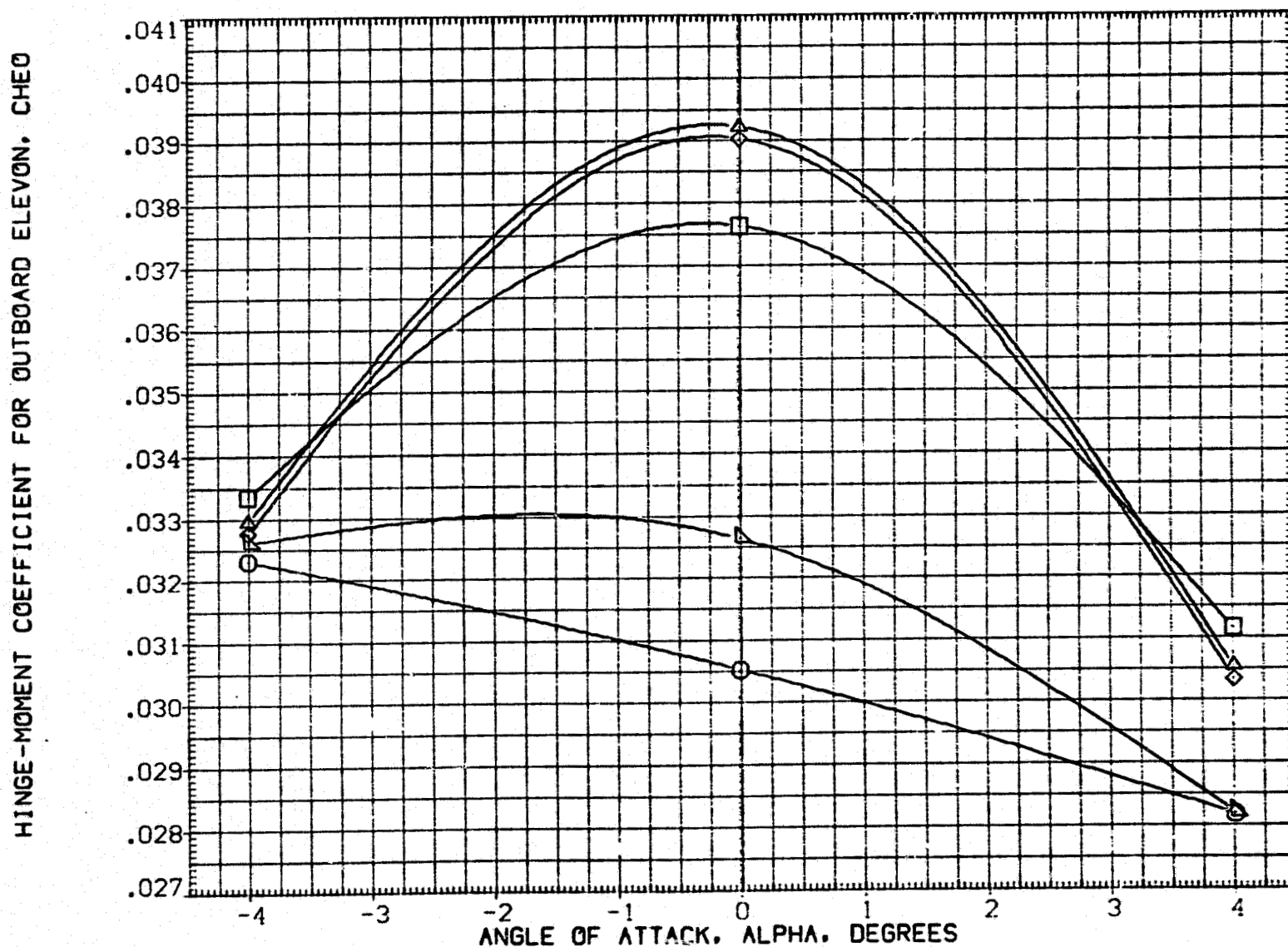


FIG. 85 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=0.9

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000 IN.
(RE4X17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000 IN.
(RE4X13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000 IN.
(RE4XB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

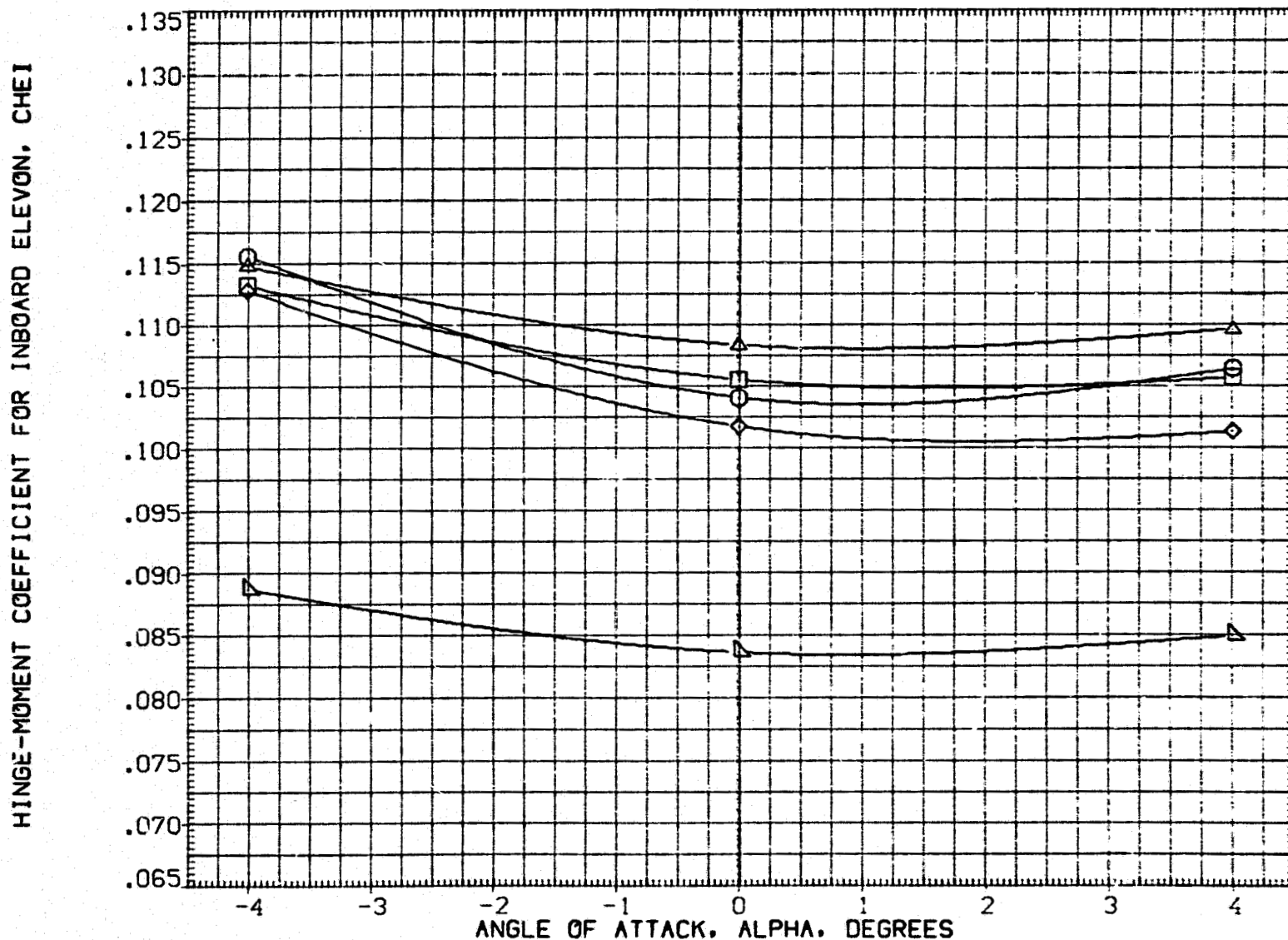


FIG. 86 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	□	ARC 11-023	1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X22)	□	ARC 11-023	1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4X17)	×	ARC 11-023	1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4X13)	△	ARC 11-023	1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4XB7)	△	ARC 11-023	1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
								ZMRP	.0000	IN.
								SCALE	.0200	

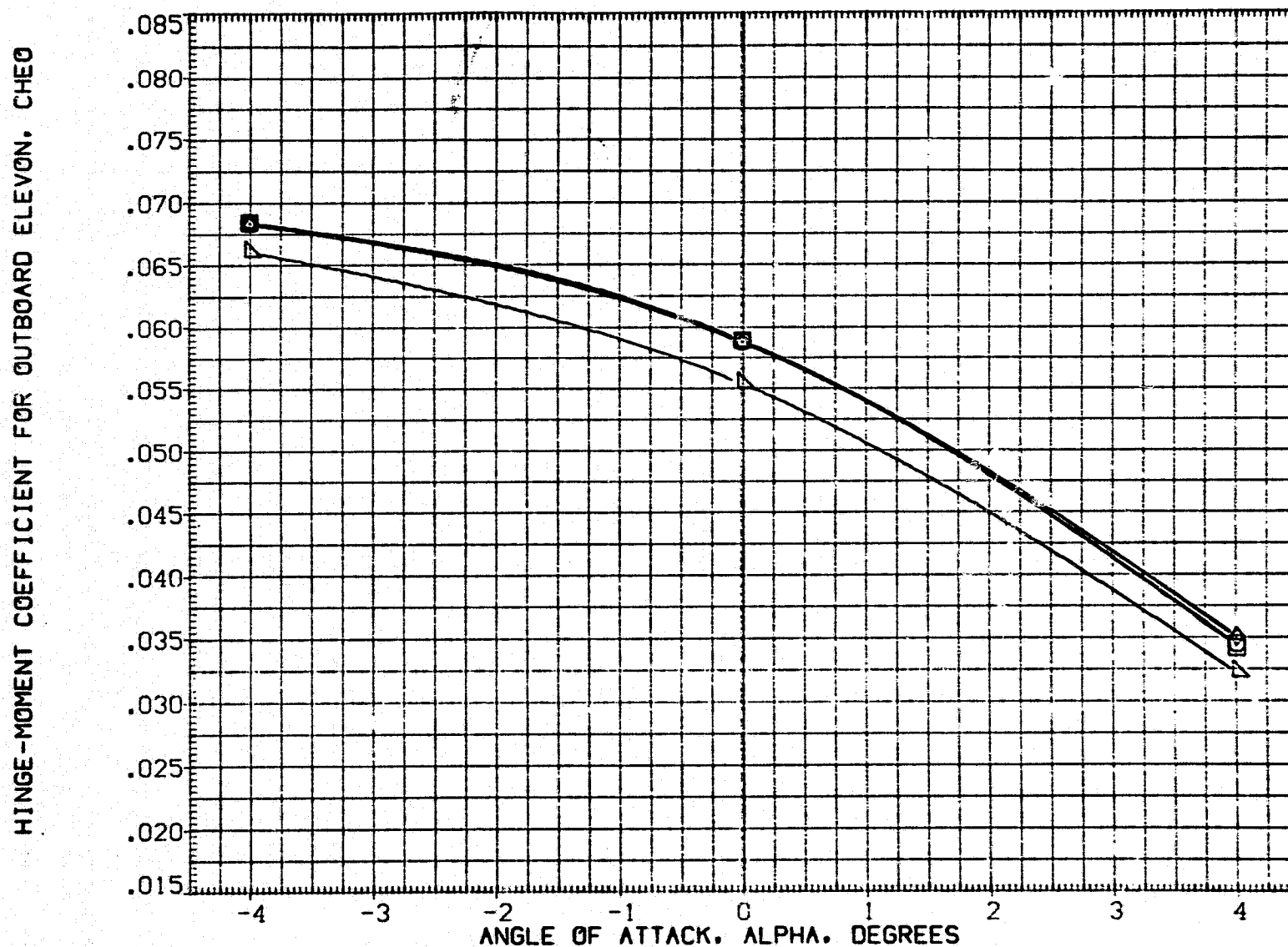


FIG. 86 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.1

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-19	MACH	RN/L	REFERENCE INFORMATION
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LRFF 1290.3000 IN.
(RE4X18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF 1290.3000 IN.
(RE4X14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP .0000 IN.
(RE4XB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

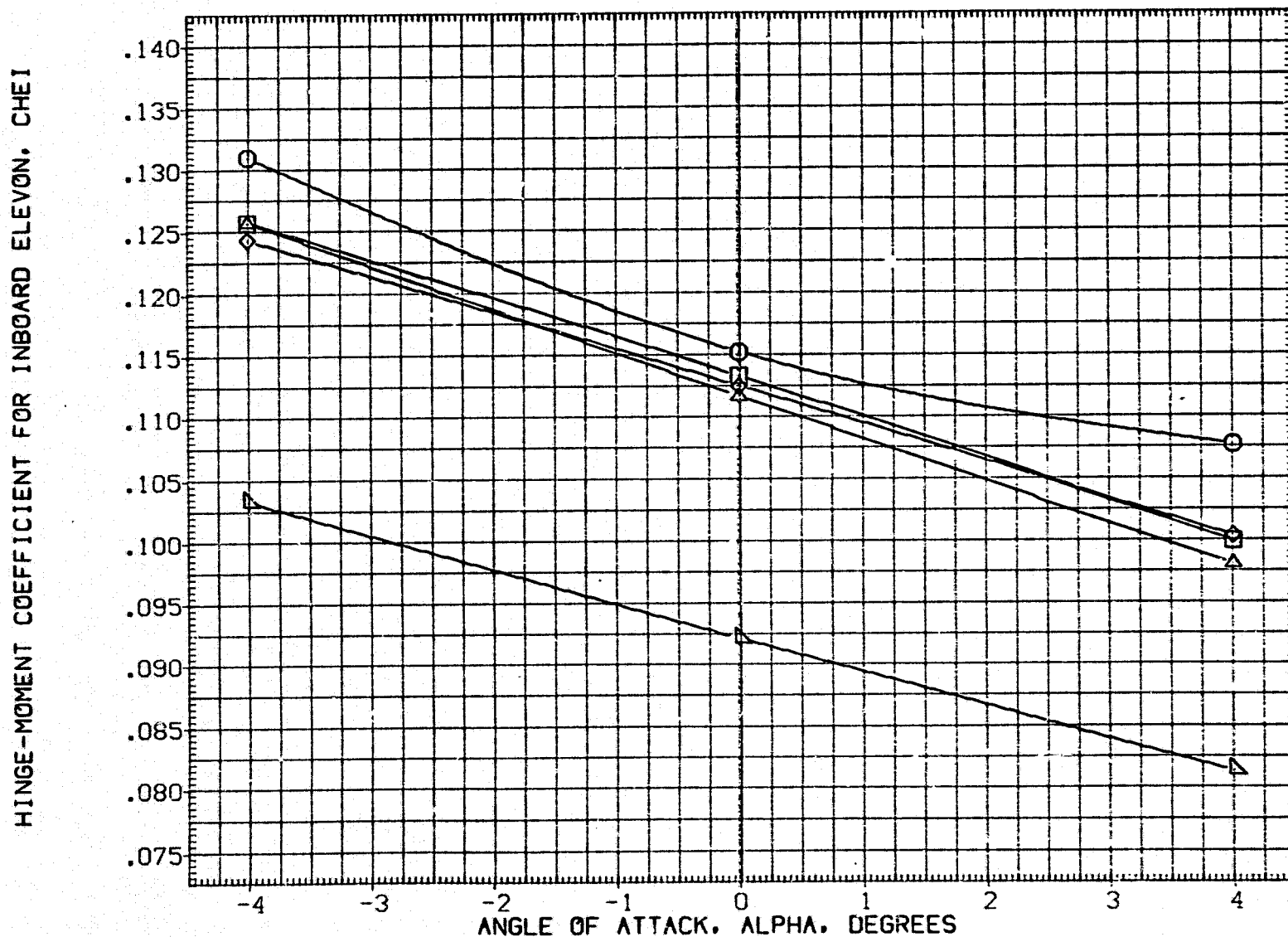


FIG. 87 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000 IN.
(RE4X18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000 IN.
(RE4X14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000 IN.
(RE4XB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

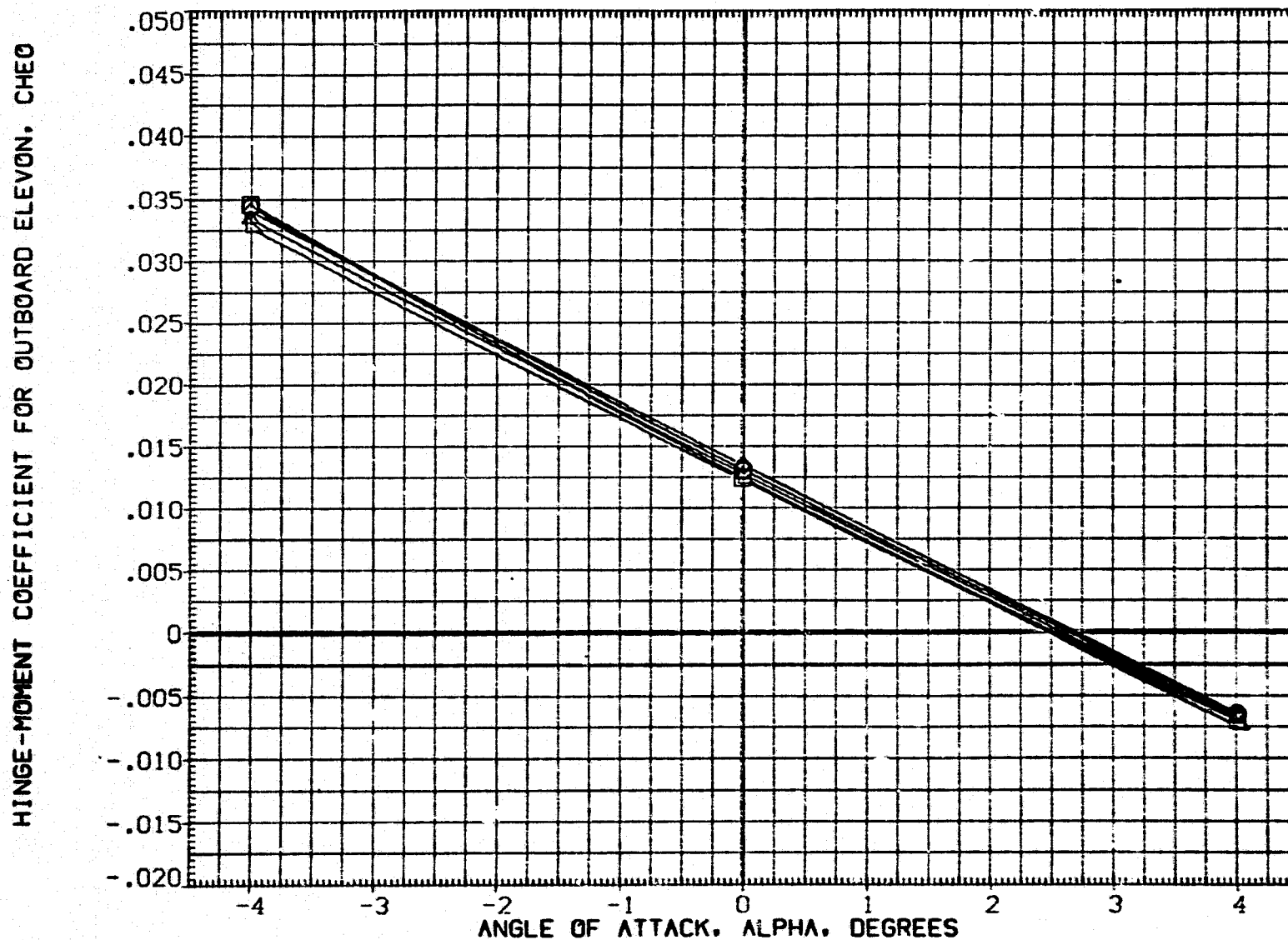


FIG. 87 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.25

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OR	MACH	RN/L	REFERENCE INFORMATION
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF 2690.0000 SC.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF 1290.3000 IN.
(RE4X19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF 1290.3000 IN.
(RE4X15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP .0000 IN.
(RE4XB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

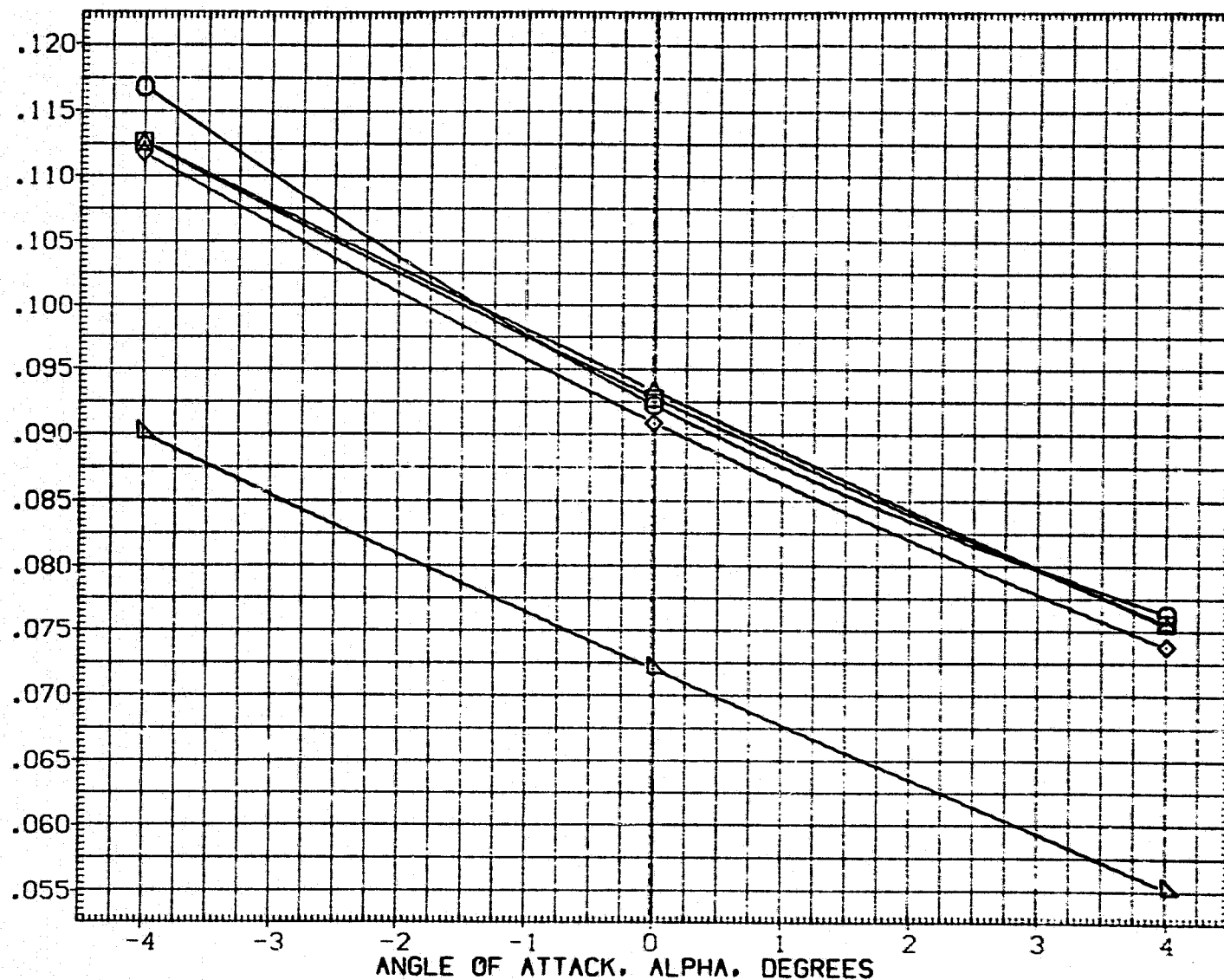


FIG. 88 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4X24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4X19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4X15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4XB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

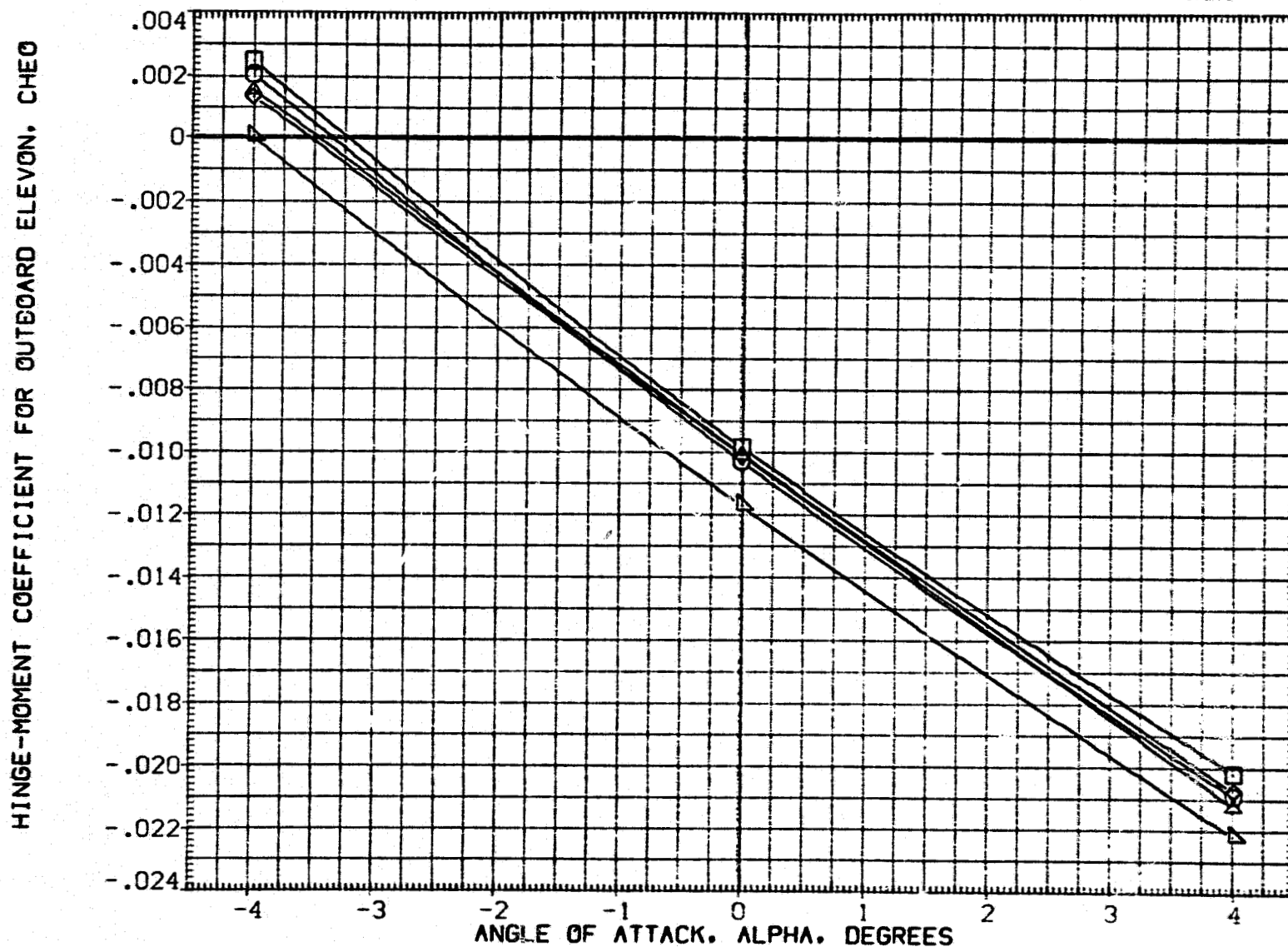


FIG. 88 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN PITCH, MACH=1.4

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4YB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON. CHEI

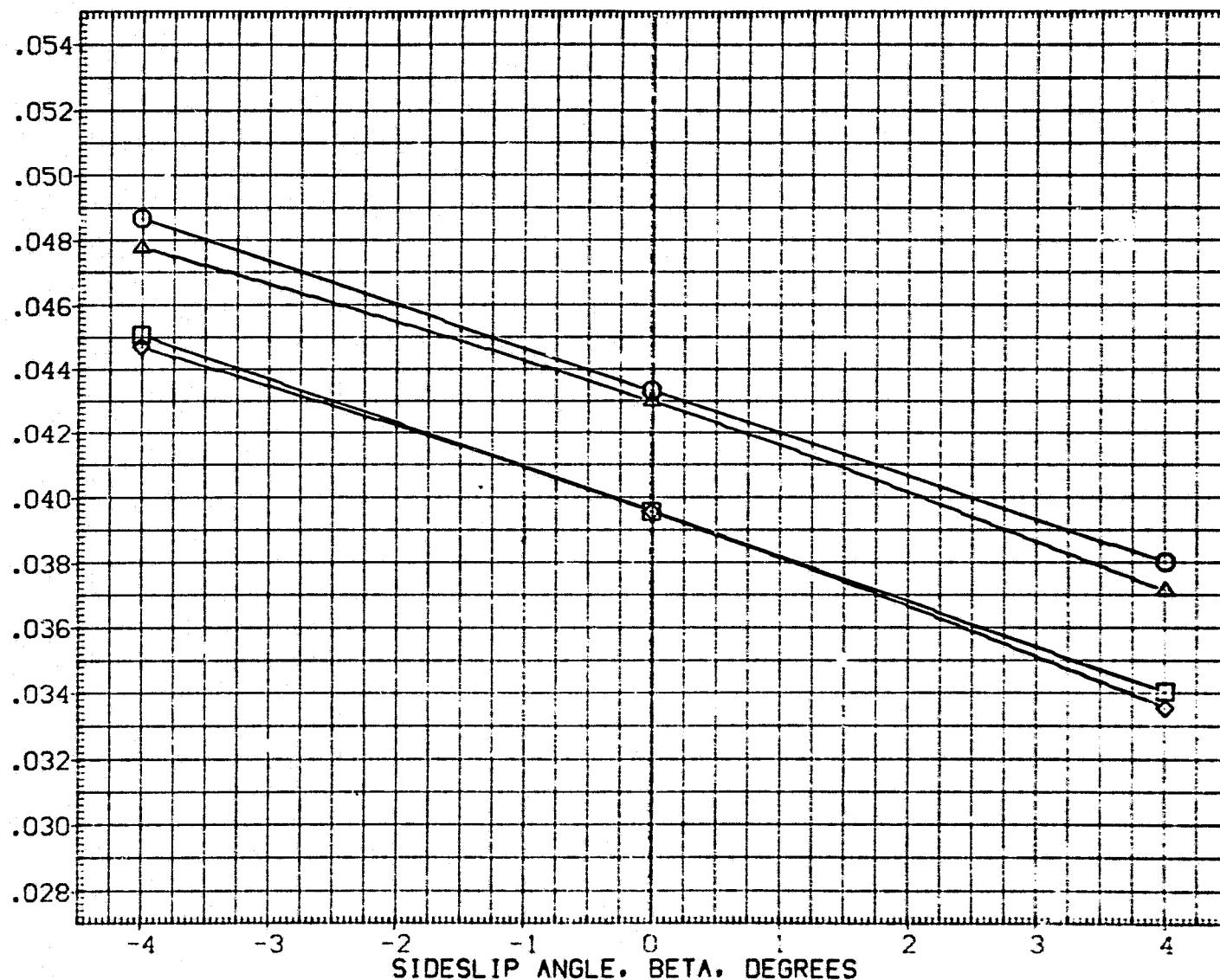


FIG. 89 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW. MACH=0.6
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y20) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	LREF	1290.3000	IN.
(RE4Y11) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.600	3.400	BREF	1290.3000	IN.
(RE4YB5) △	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.600	3.400	YMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

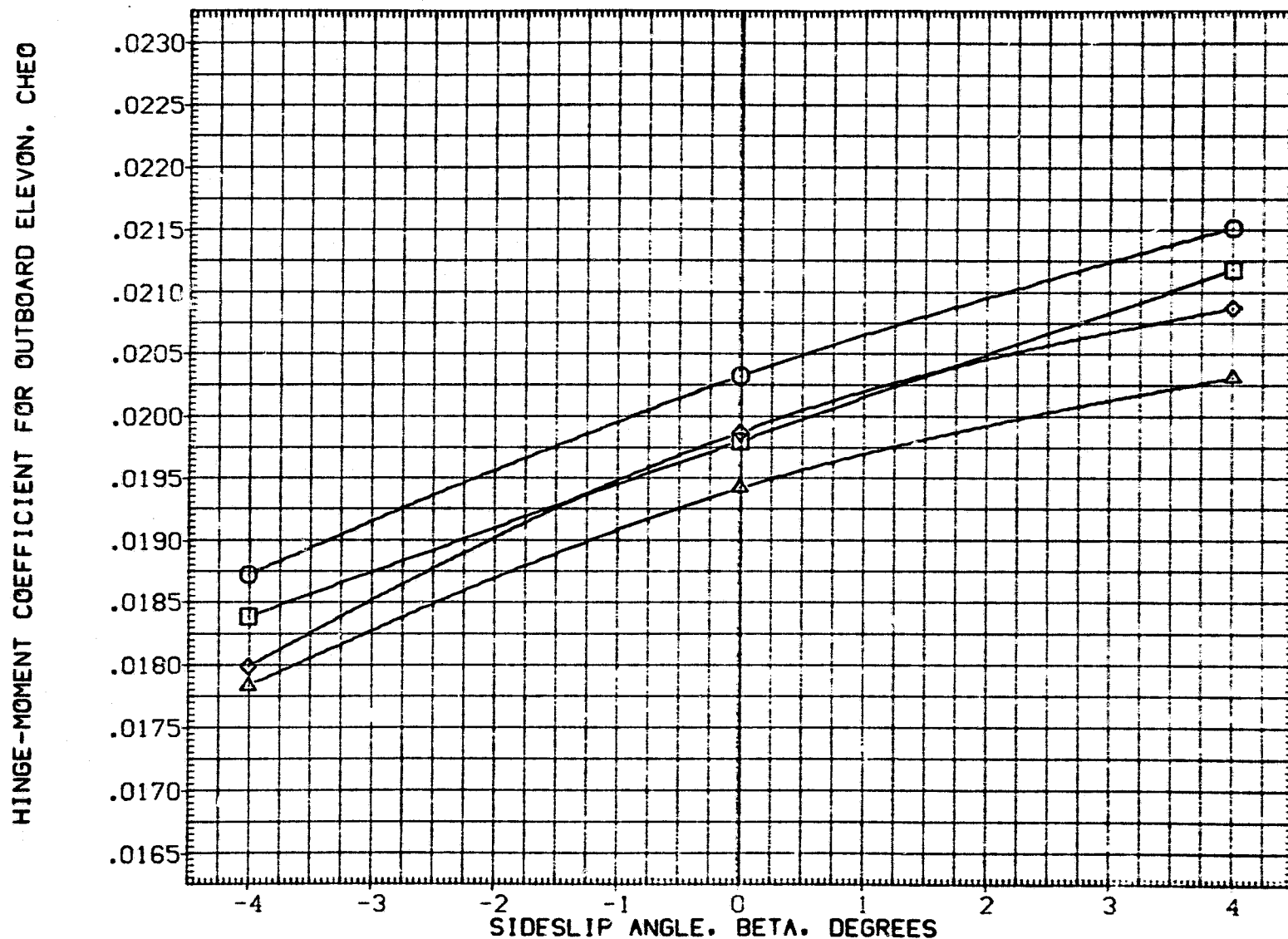


FIG. 89 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=0.6

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF 2690.0000 SQ.FT.
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF 1290.3000 IN.
(RE4Y16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.900	4.250	BREF 1290.3000 IN.
(RE4Y12)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP .0000 IN.
(RE4Y86)	ARC 11-023 1A80 OTS (SRE NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

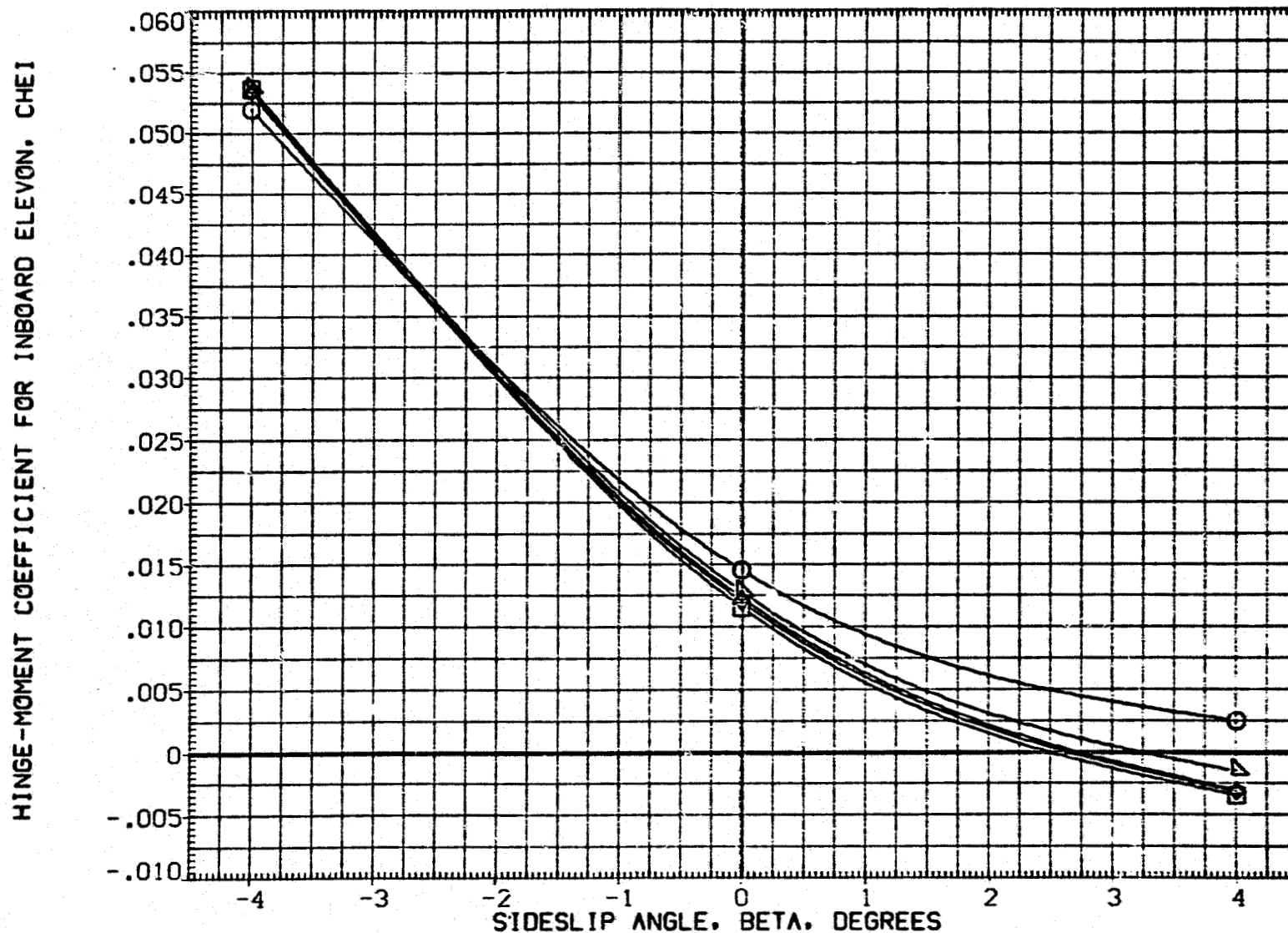


FIG. 90 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=0.9
 (A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y21)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	LREF	1290.3000	IN.
(RE4Y16)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	.900	1.250	BREF	1290.3000	IN.
(RE4Y12)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	.900	4.250	XMRP	.0000	IN.
(RE4YB6)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.900	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

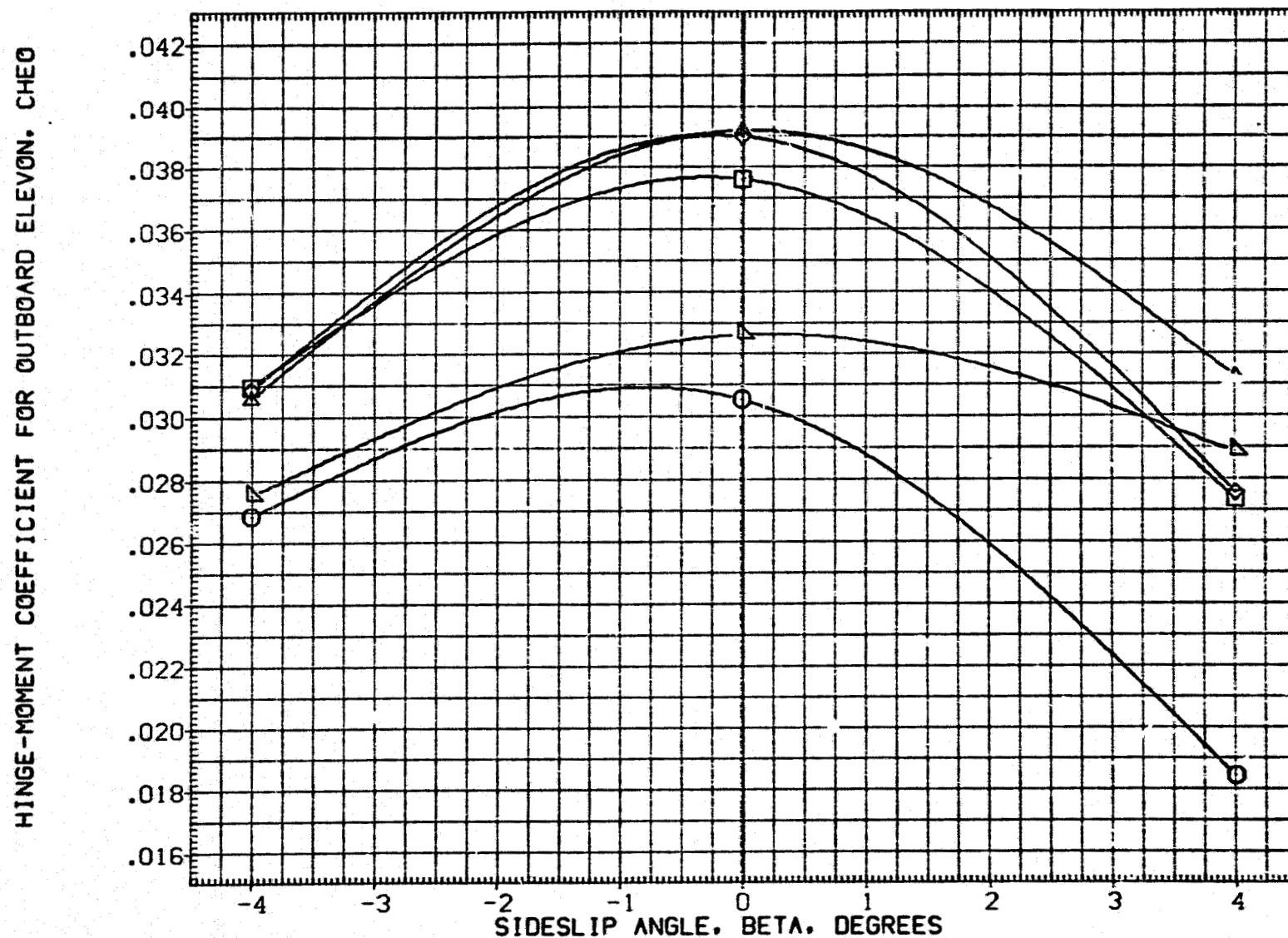


FIG. 90 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=0.9
 (A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y30)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF 2690.0000 SQ.FT.
(RE4Y22)	□	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF 1290.3000 IN.
(RE4Y17)	◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF 1290.3000 IN.
(RE4Y13)	△	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP .0000 IN.
(RE4YB7)	▽	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP .0000 IN.
							ZMRP .0000 IN.
							SCALE .0200

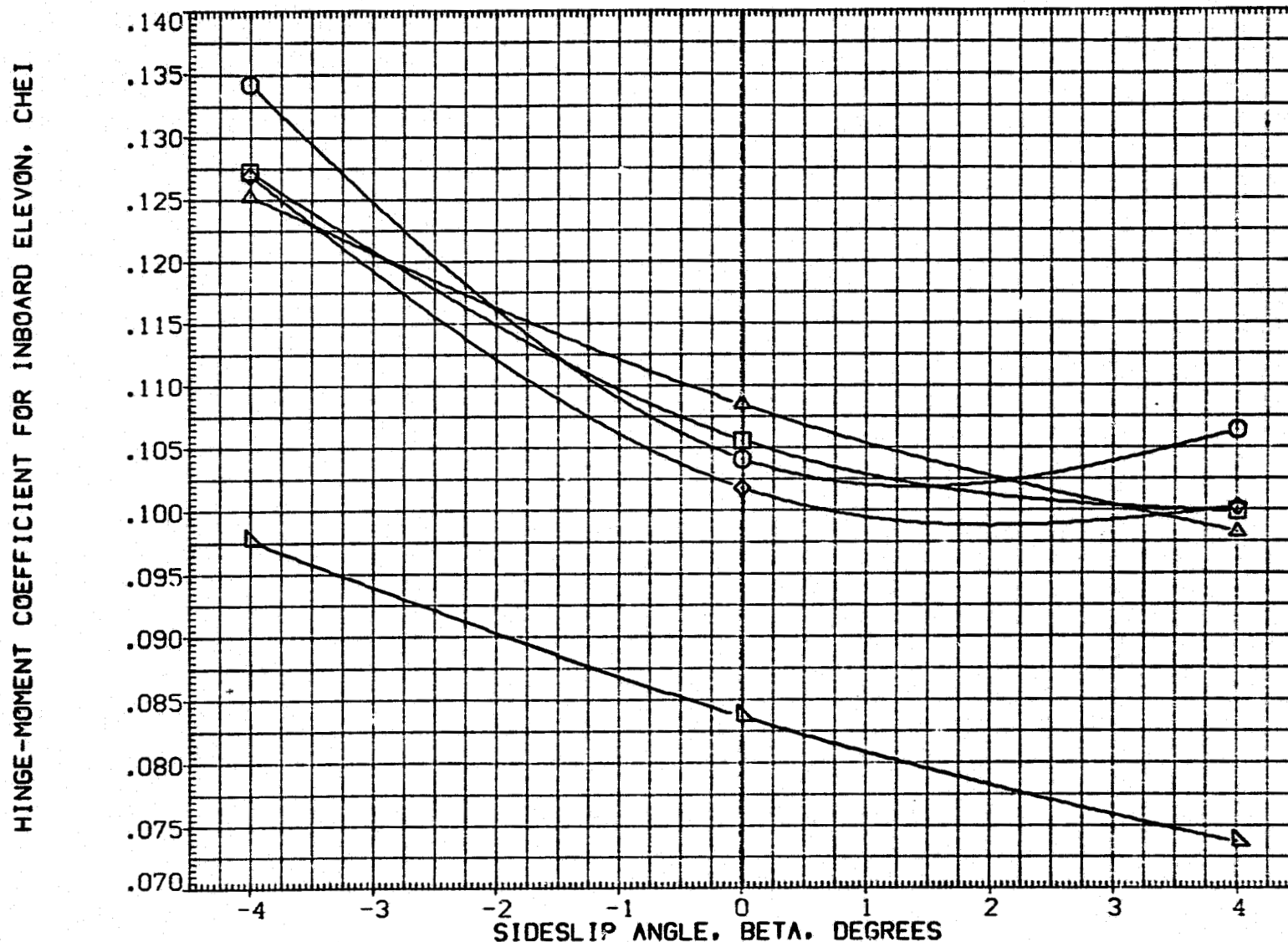


FIG. 91 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	LREF	1290.3000	IN.
(RE4Y17)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.100	4.250	BREF	1290.3000	IN.
(RE4Y13)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.100	4.250	XMRP	.0000	IN.
(RE4YB7)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.100	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

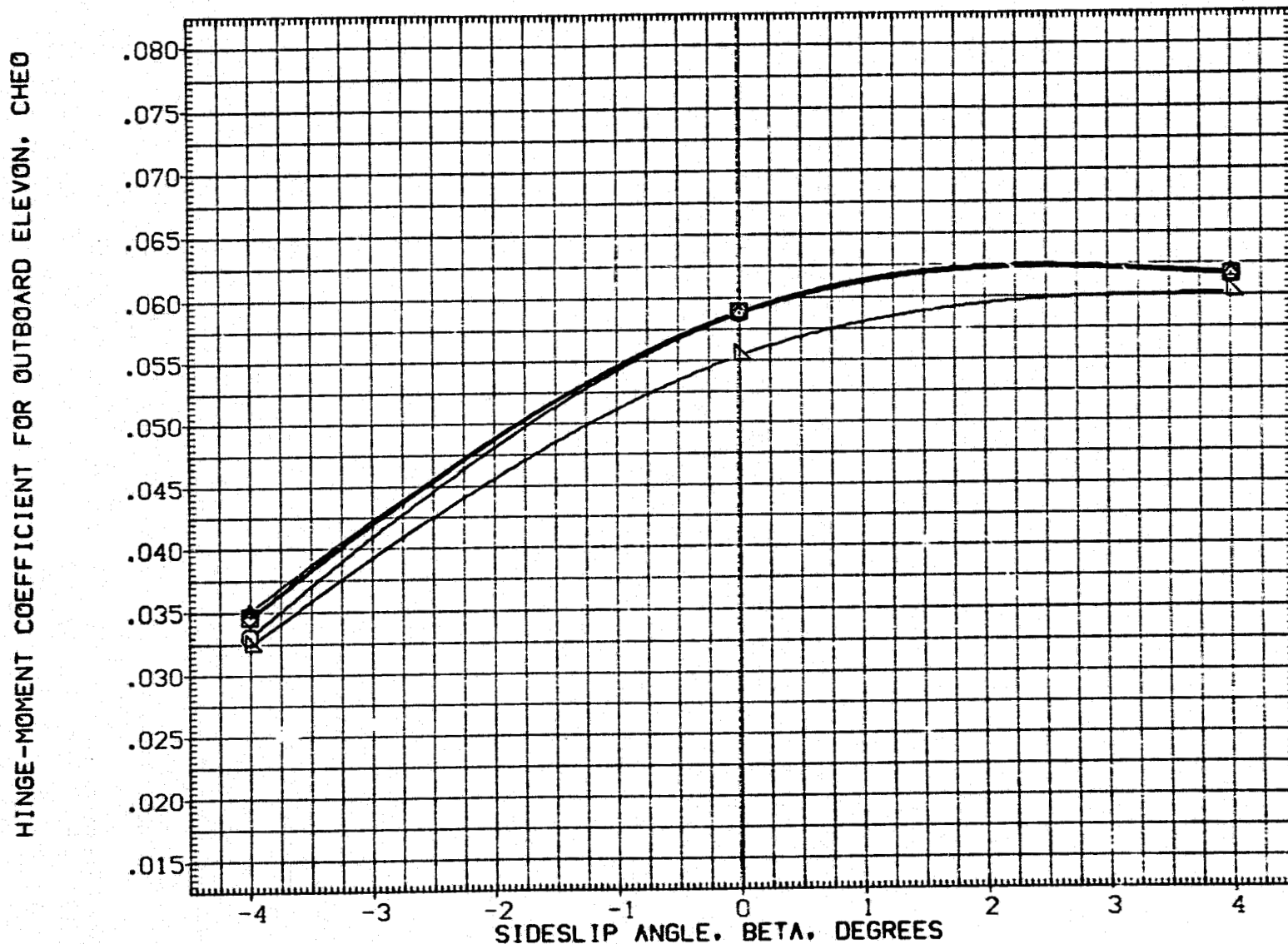


FIG. 91 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.1
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF 2690.0000 SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF 1290.3000 IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF 1290.3000 IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMPP .0000 IN.
(RE4Y88)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMPP .0000 IN.
						ZMPP .0000 IN.
						SCALE .0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON. CHEI

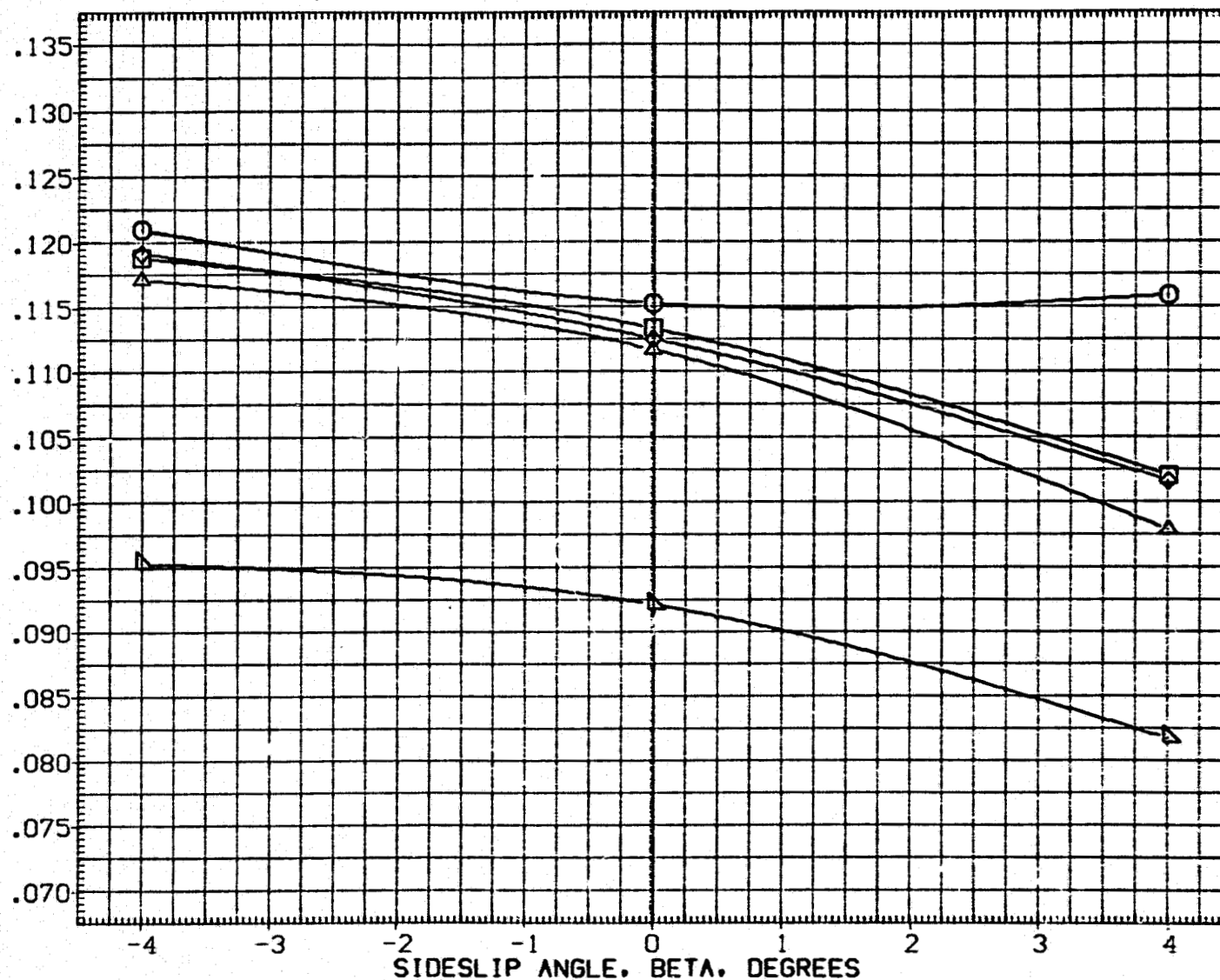


FIG. 92 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.25
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4Y23)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.250	4.250	LREF	1290.3000	IN.
(RE4Y18)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.250	4.250	BREF	1290.3000	IN.
(RE4Y14)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.250	4.250	XMRP	.0000	IN.
(RE4YB8)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.250	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

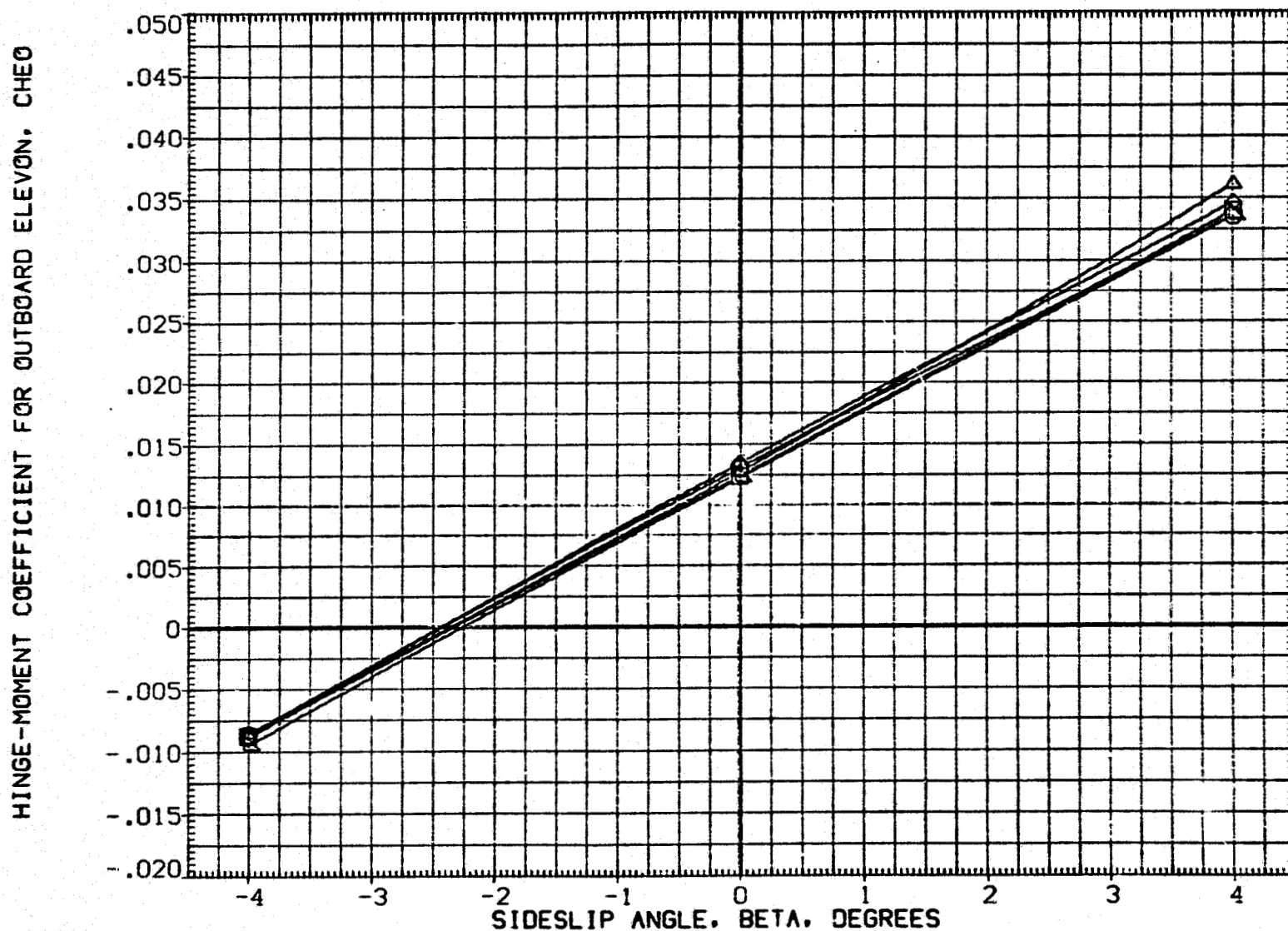


FIG. 92 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.25

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4YB9)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

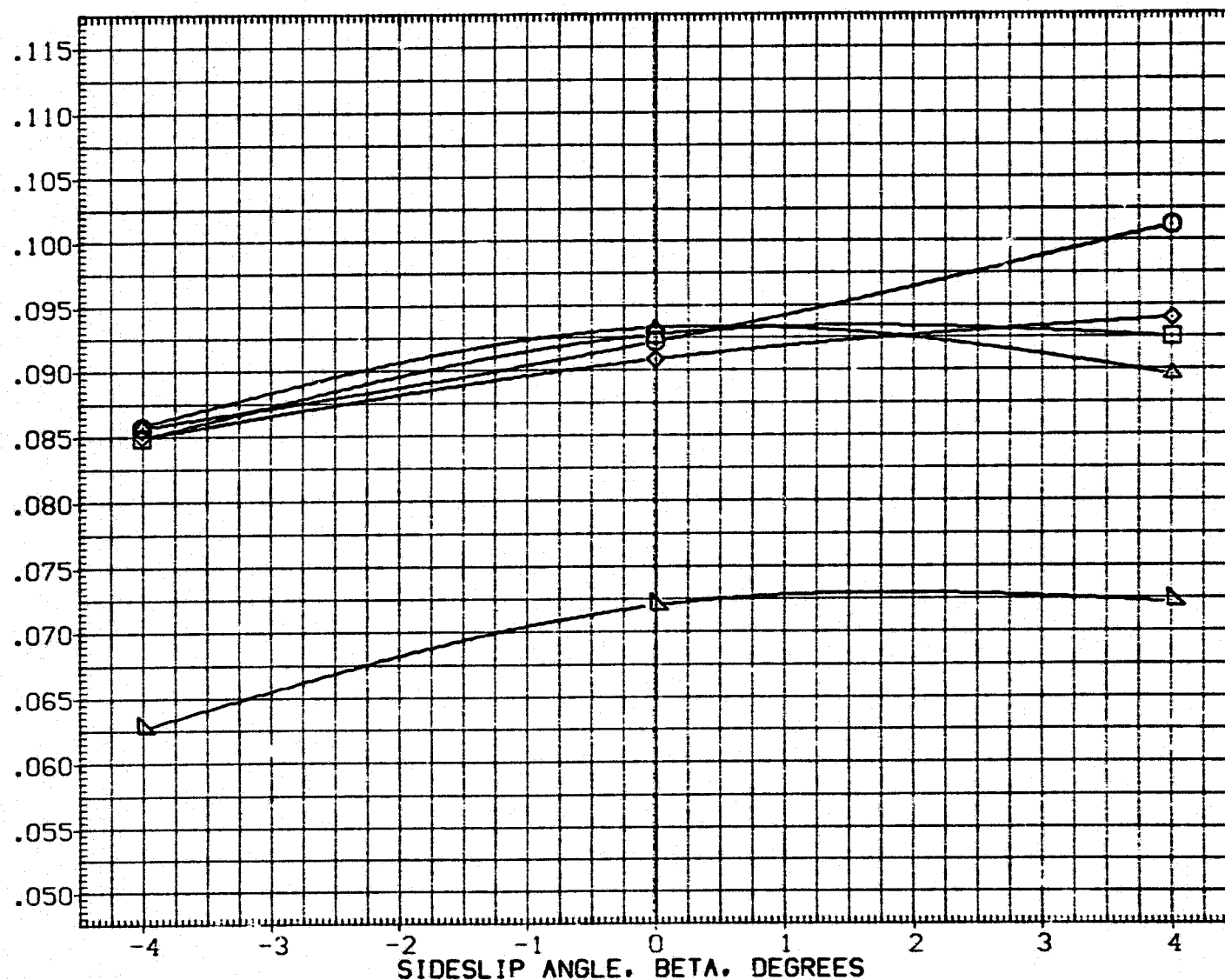


FIG. 93 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y24)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.400	4.250	LREF	1290.3000	IN.
(RE4Y19)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	1.400	4.250	BREF	1290.3000	IN.
(RE4Y15)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	1.400	4.250	XMRP	.0000	IN.
(RE4Y89)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	1.400	4.250	YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

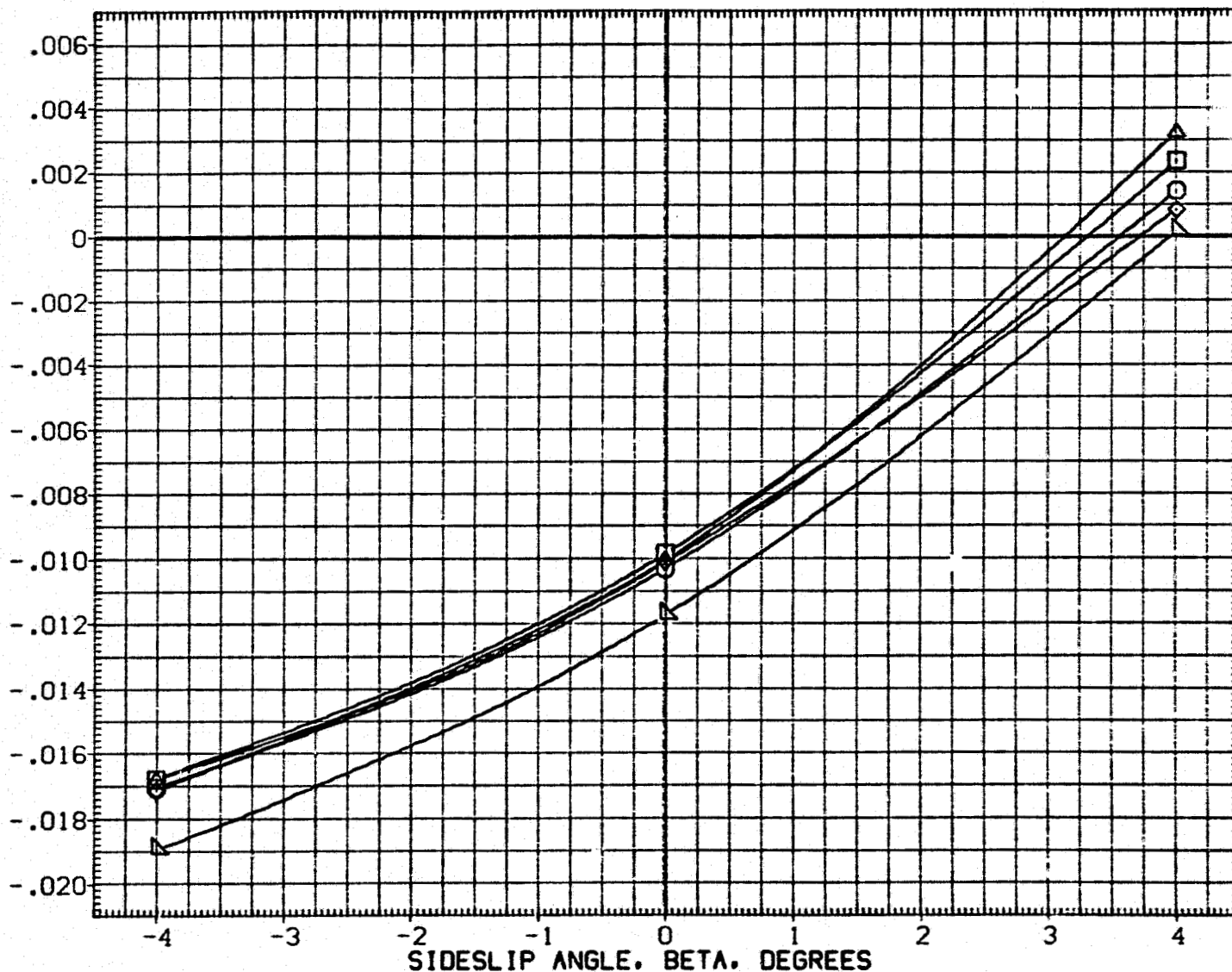


FIG. 93 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT IN YAW, MACH=1.4

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X28)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)
(RE4X41)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)
(RE4X33)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
.000	.000	.600	3.400	SREF 2690.0000 SQ.FT.
.000	.000	.600	2.500	LREF 1290.3000 IN.
.000	.000	.600	1.750	BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

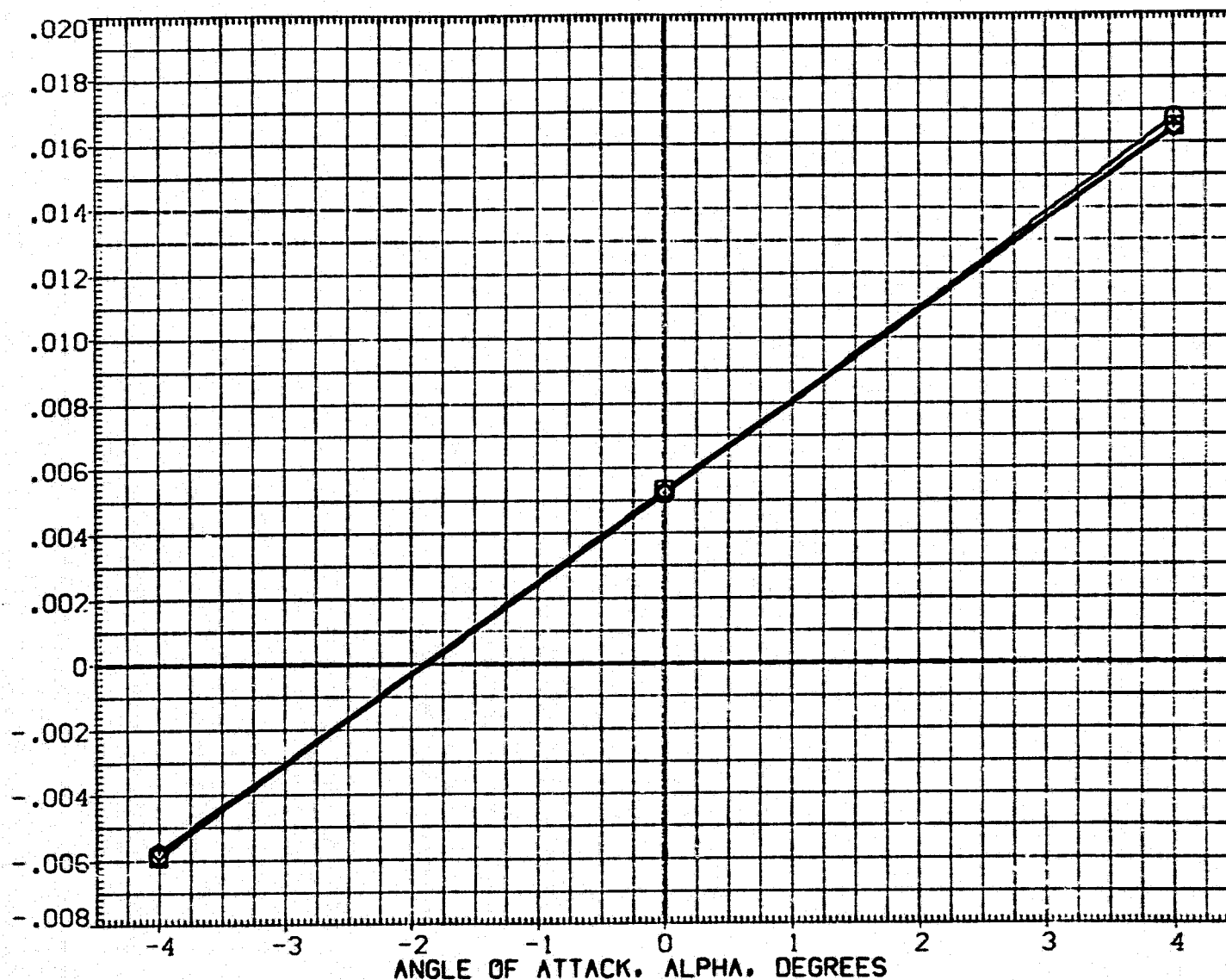


FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A) BETA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4X41)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4X33)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
							XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

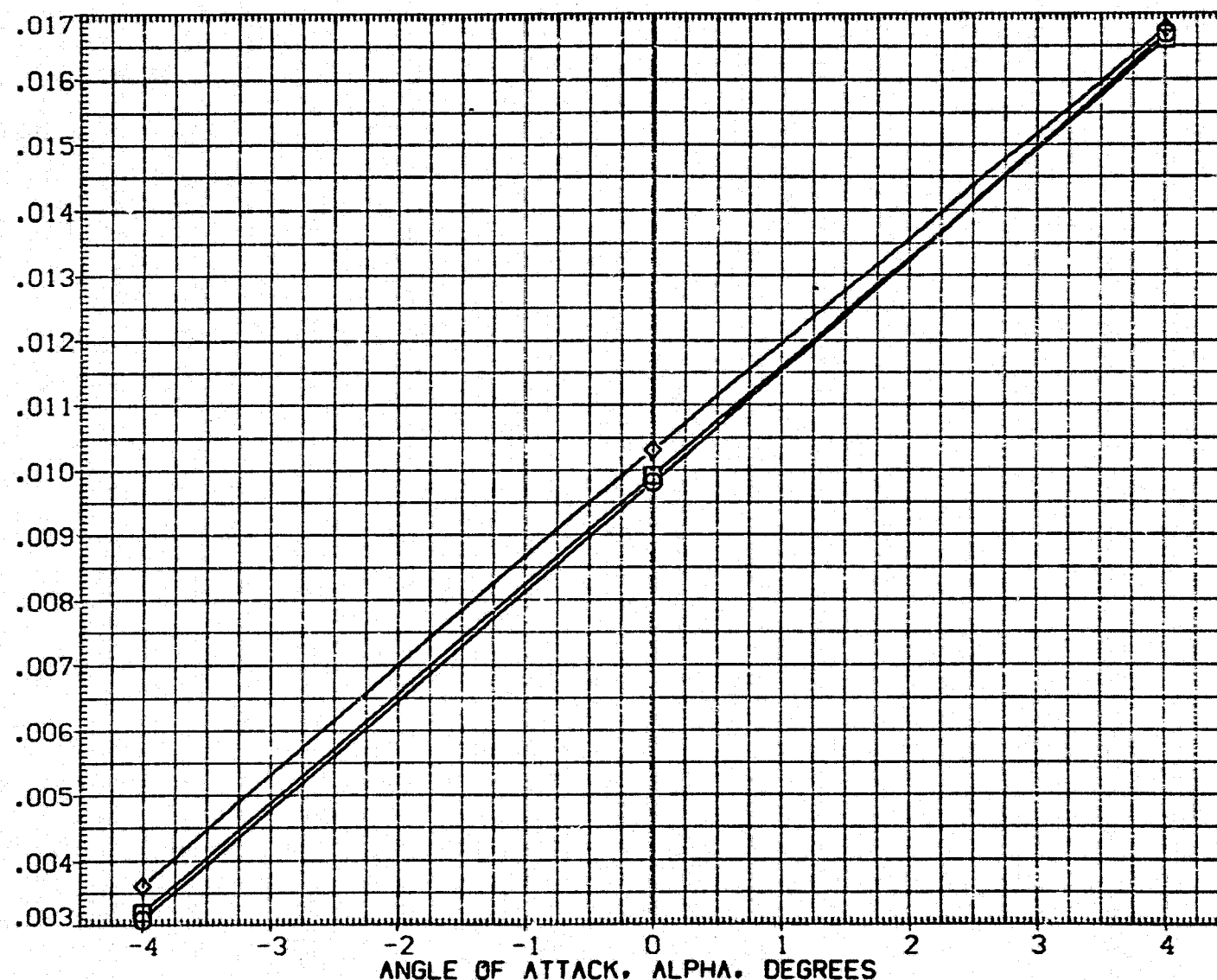


FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50.FT.
(RE4X41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4X33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

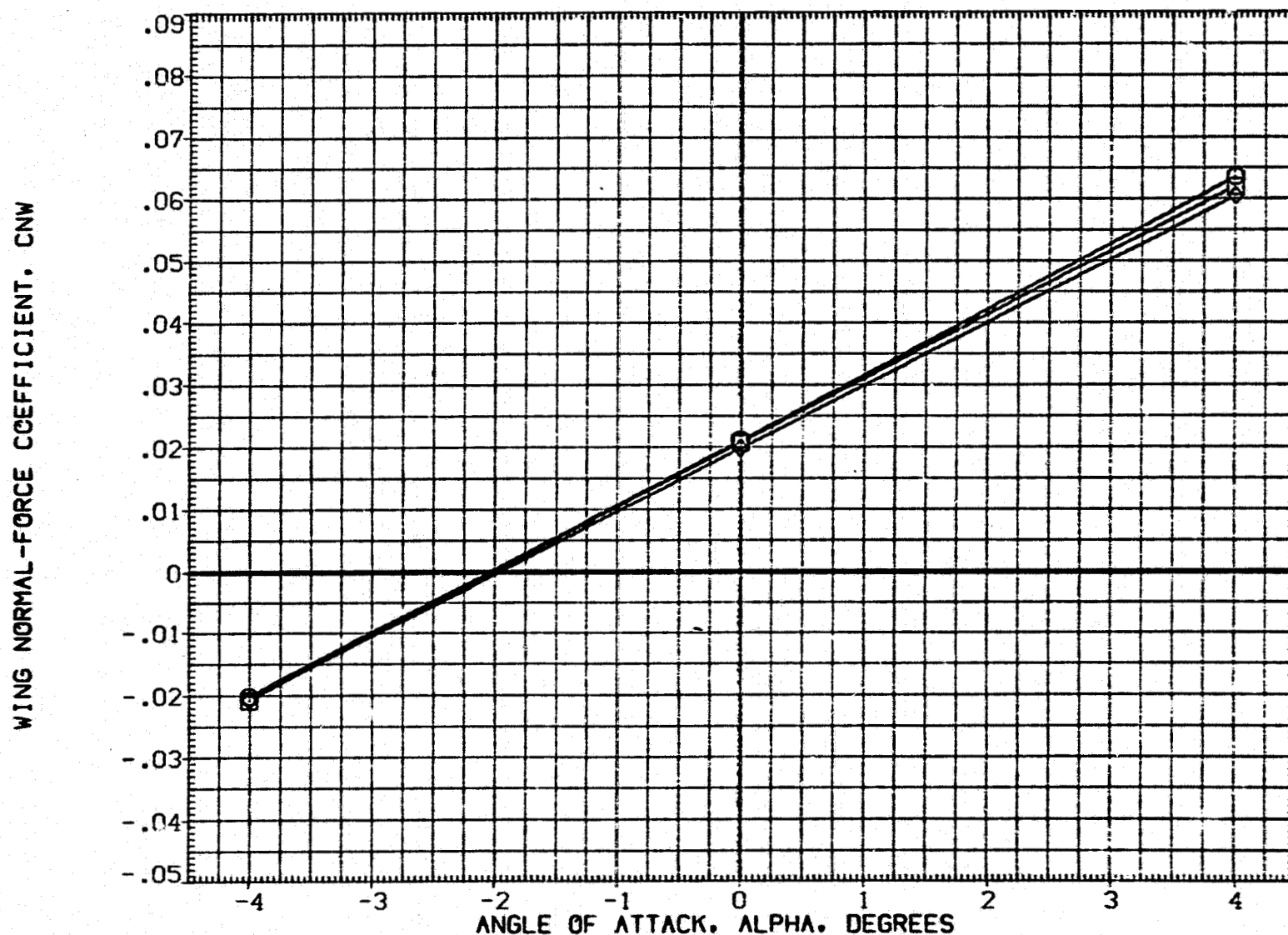


FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	50. FT.
(RE4X41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4X33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

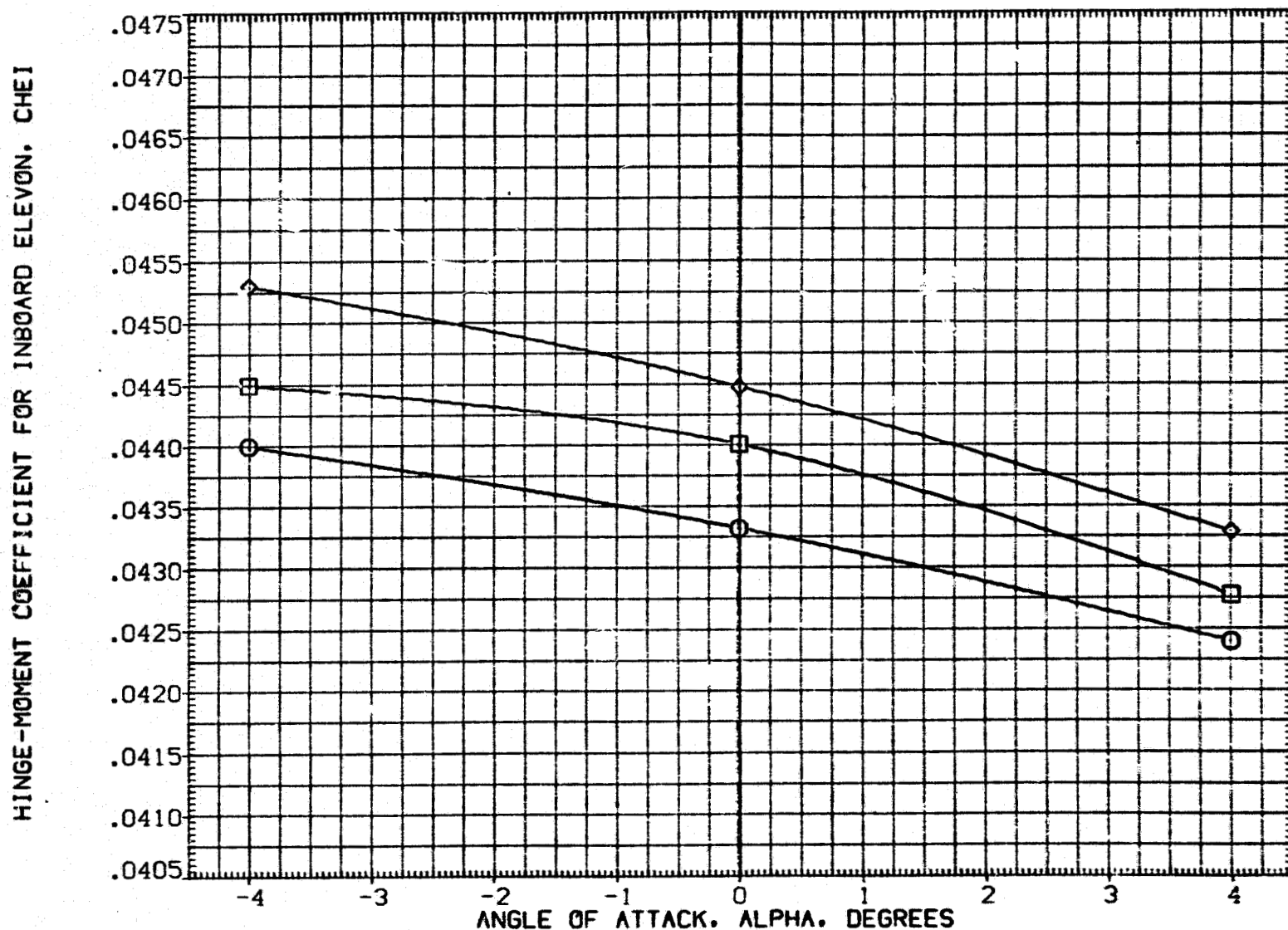





FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X28) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X41) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4X33) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

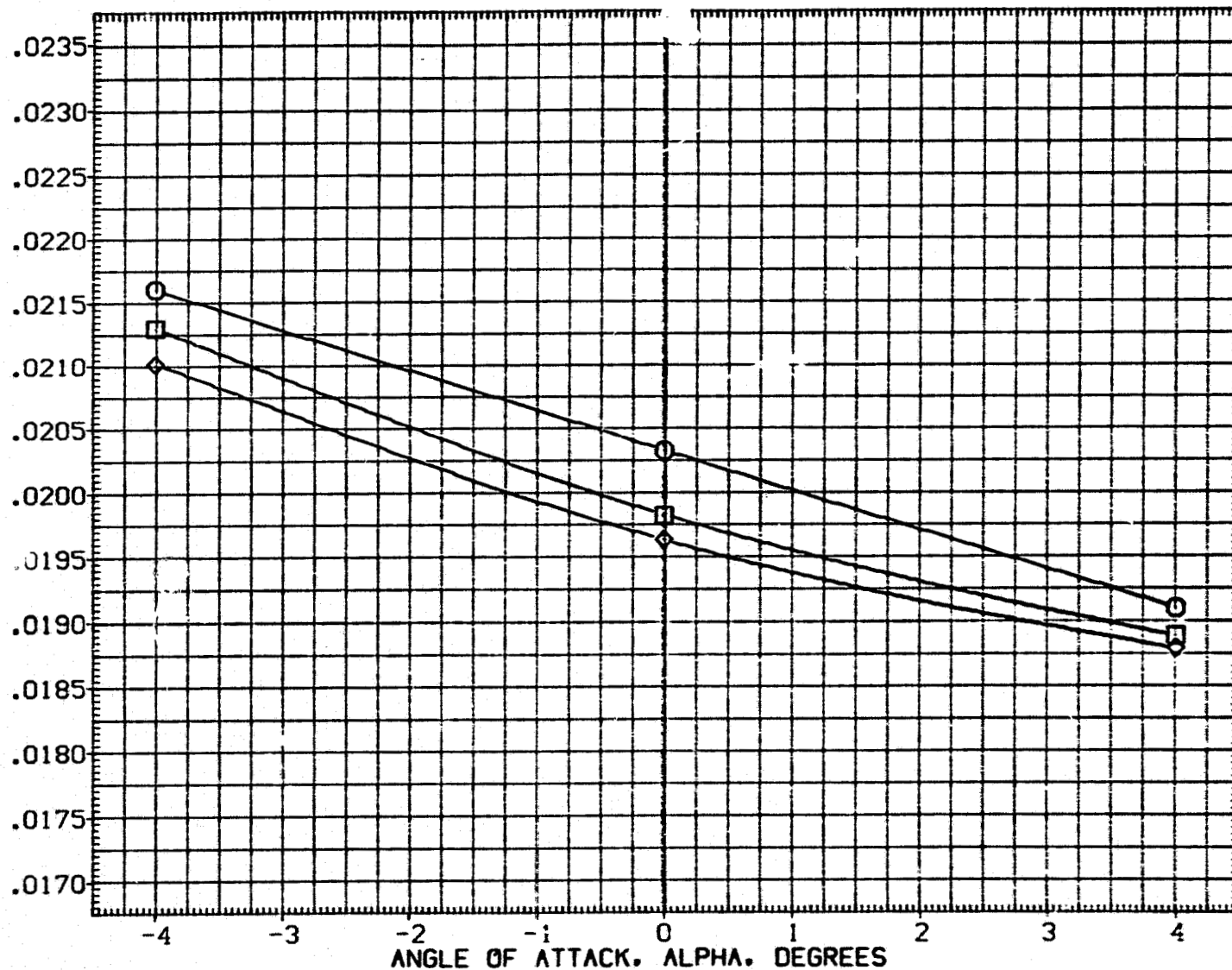


FIG. 94 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES OFF

A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SD.FT.
(RE4X42) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X34) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

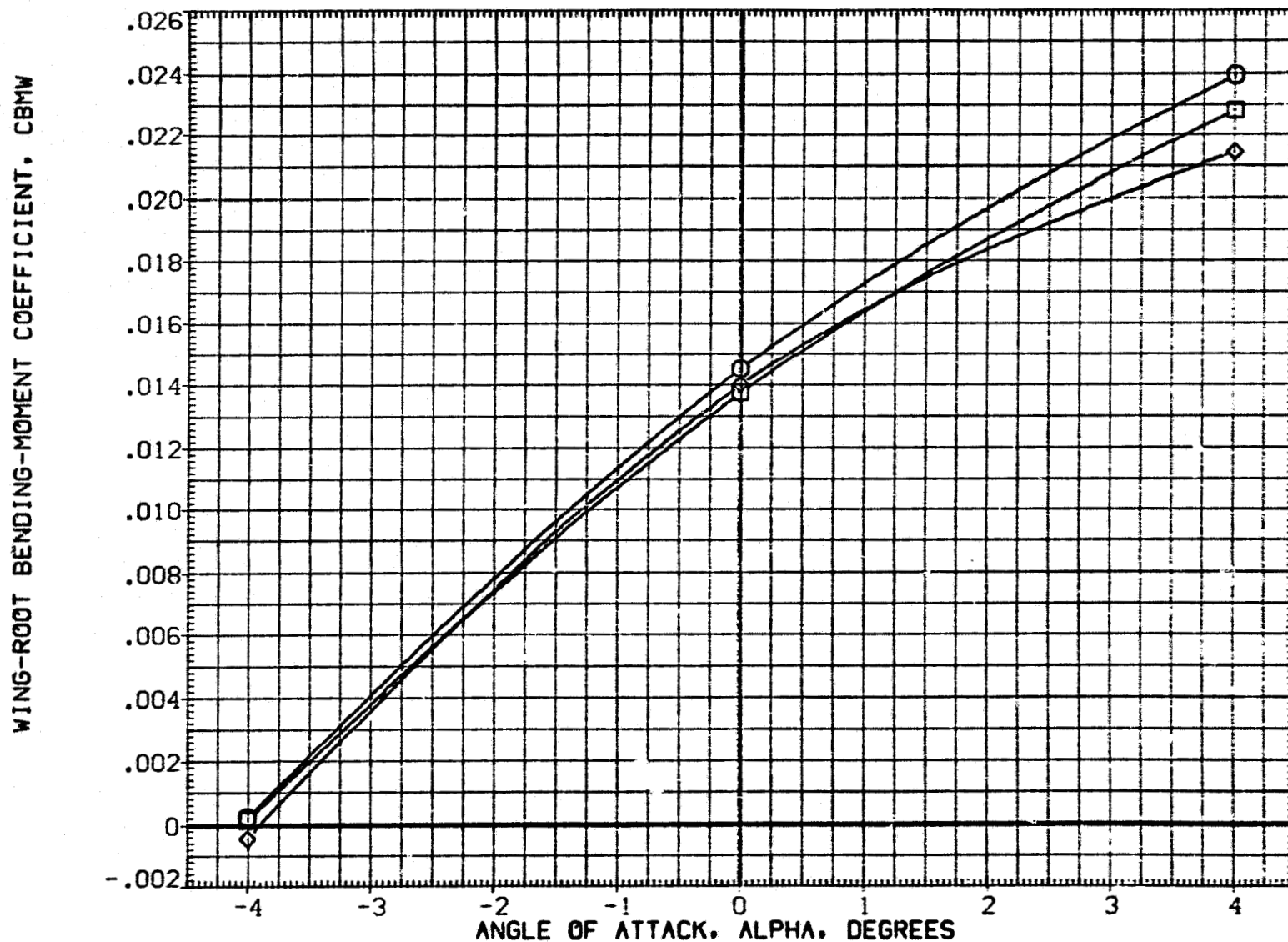


FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-TB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4X29)	ARC 11-023 1A30 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4X34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

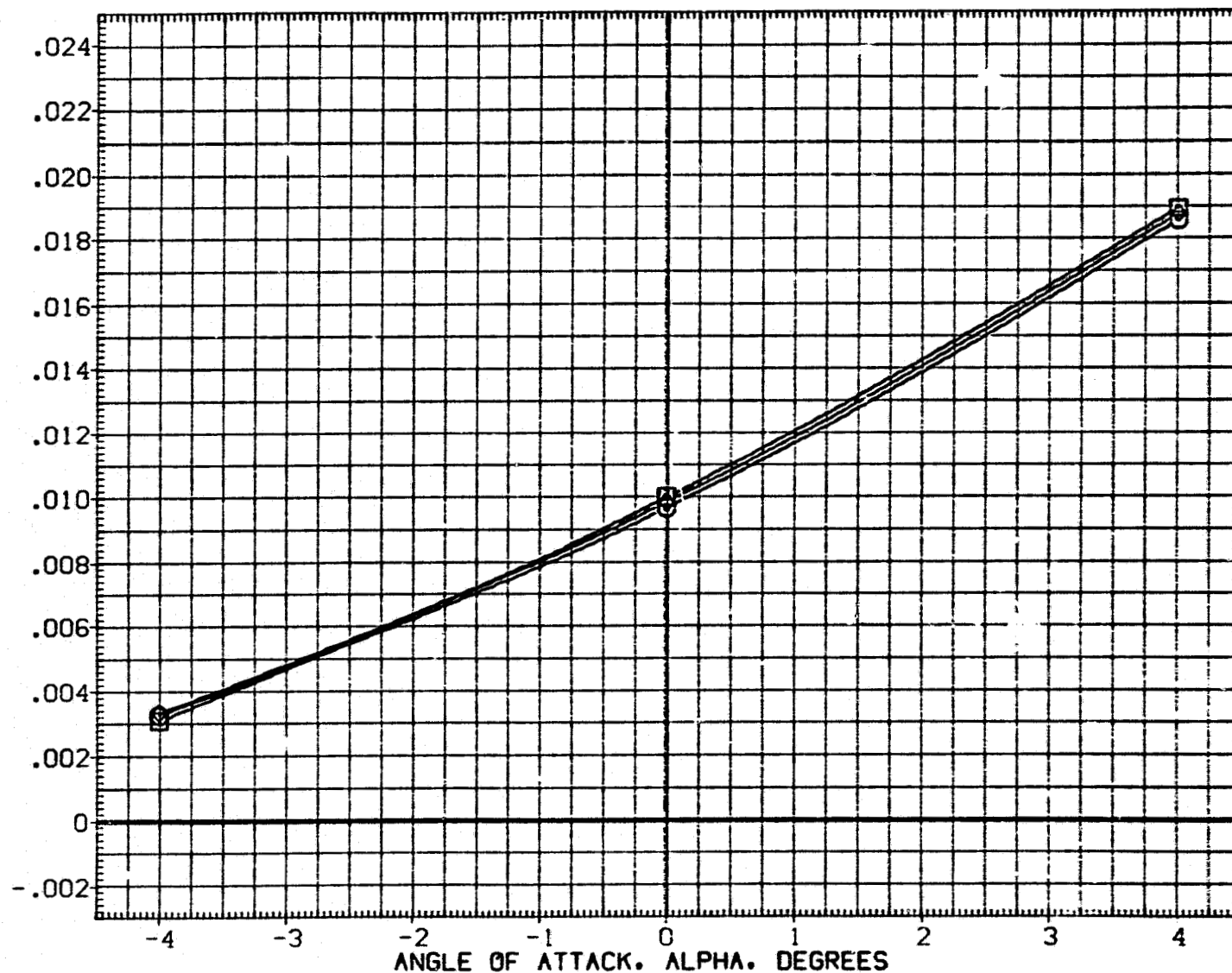


FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SO.FT.
(RE4X42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRRP	.0000	IN.
						YMRRP	.0000	IN.
						ZMRRP	.0000	IN.
						SCALE	.0200	

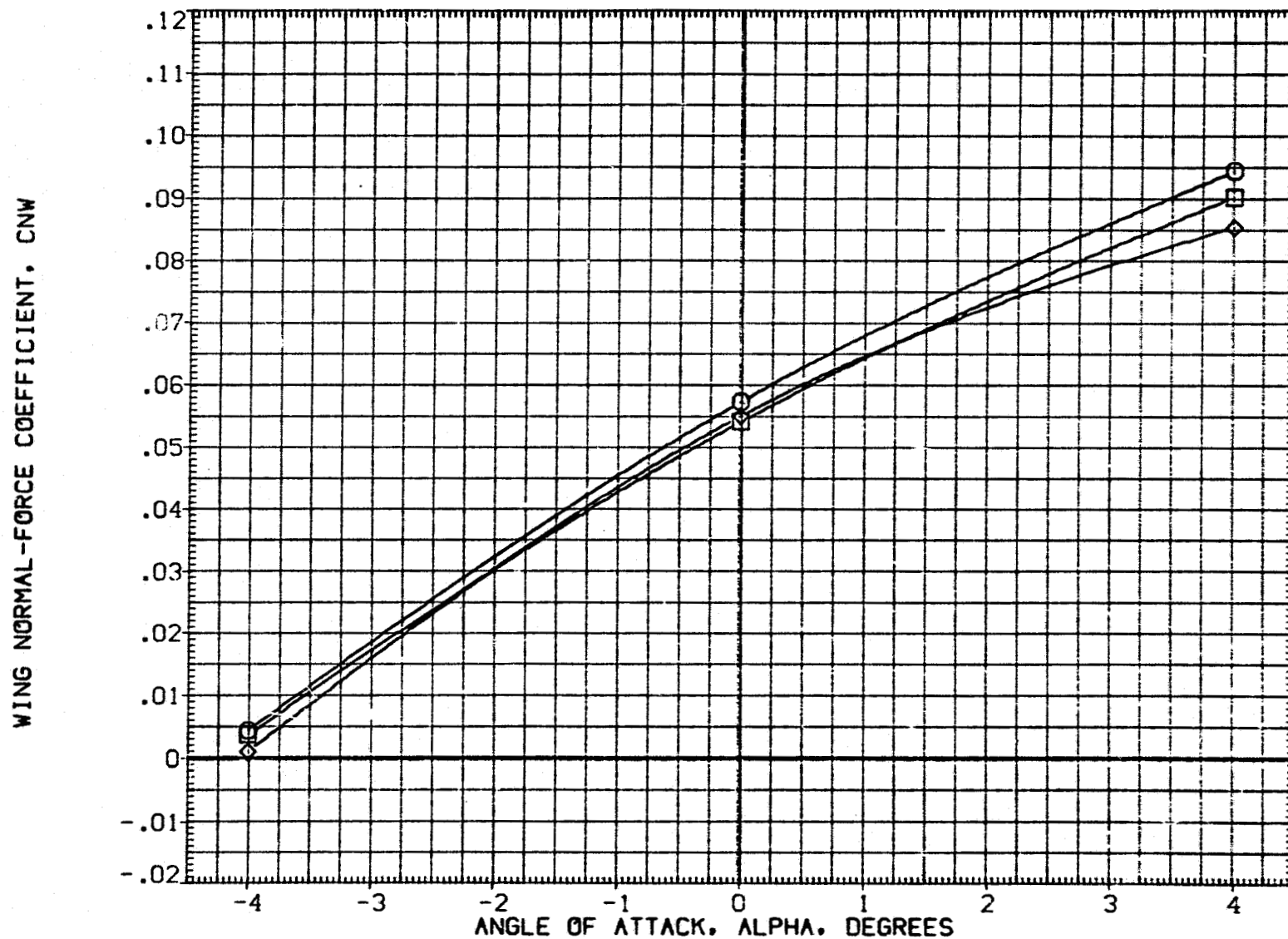


FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SO.FT.
(RE4X42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

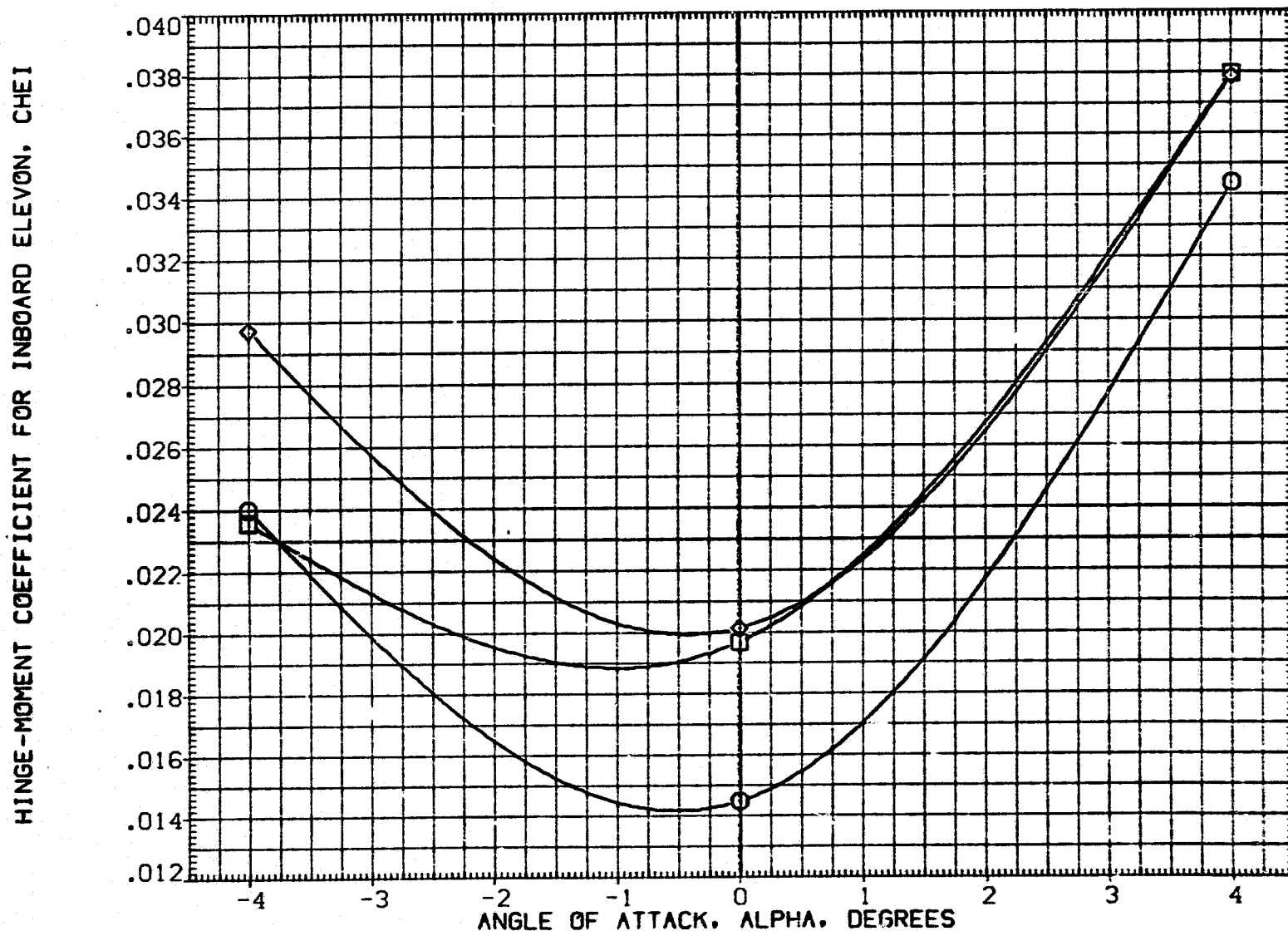


FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

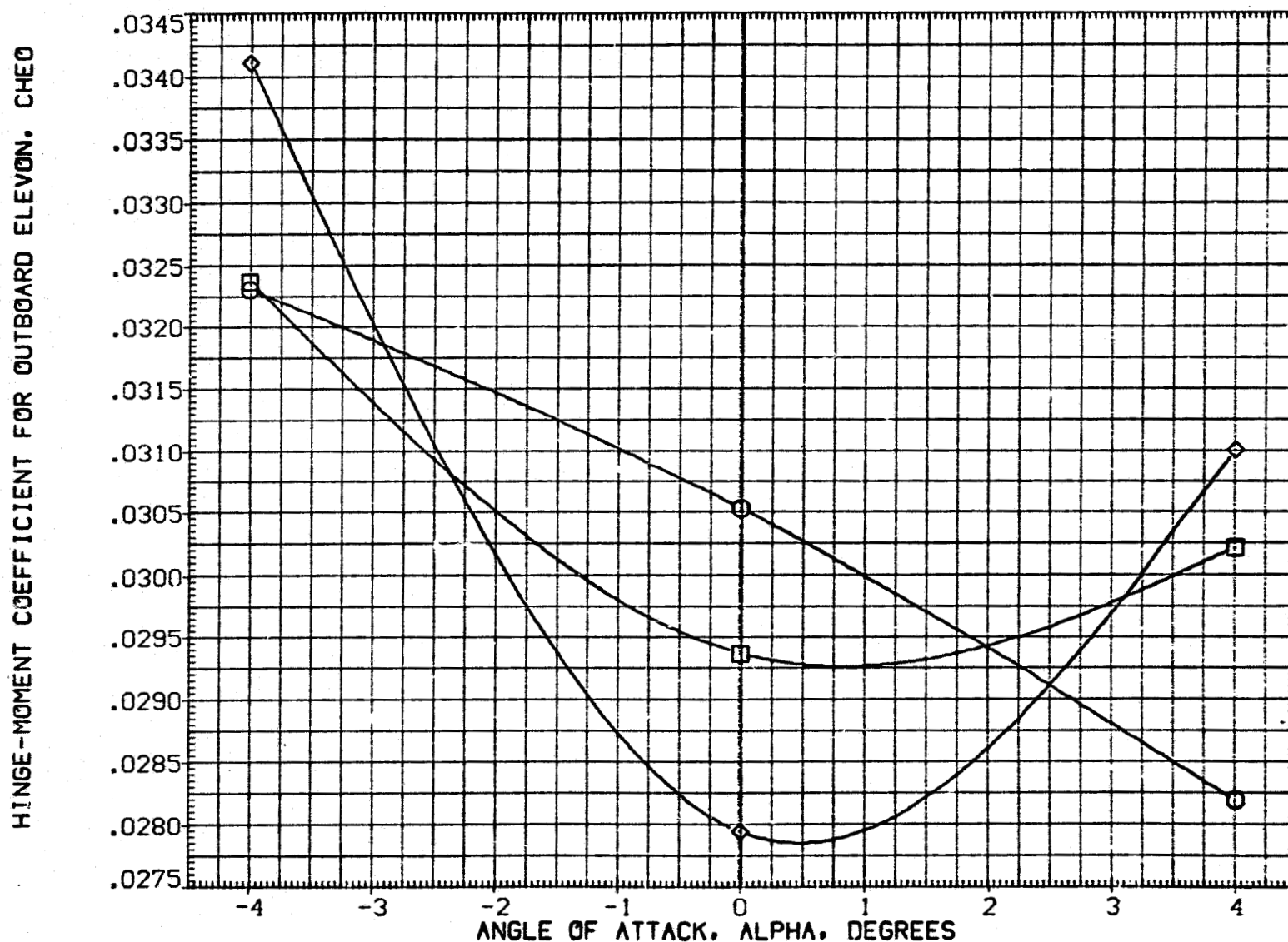


FIG. 95 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4X43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4X35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

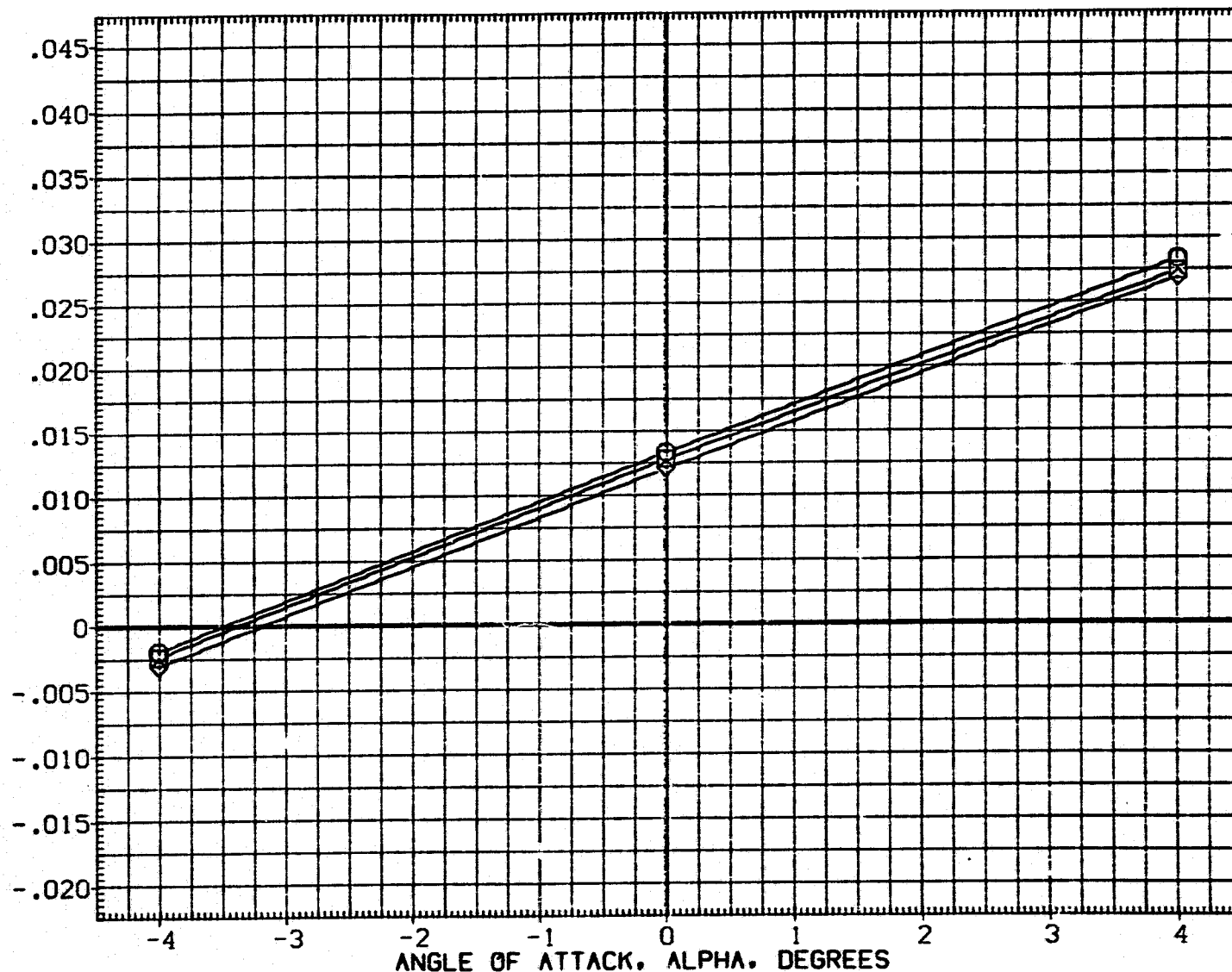


FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X43) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4X35) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

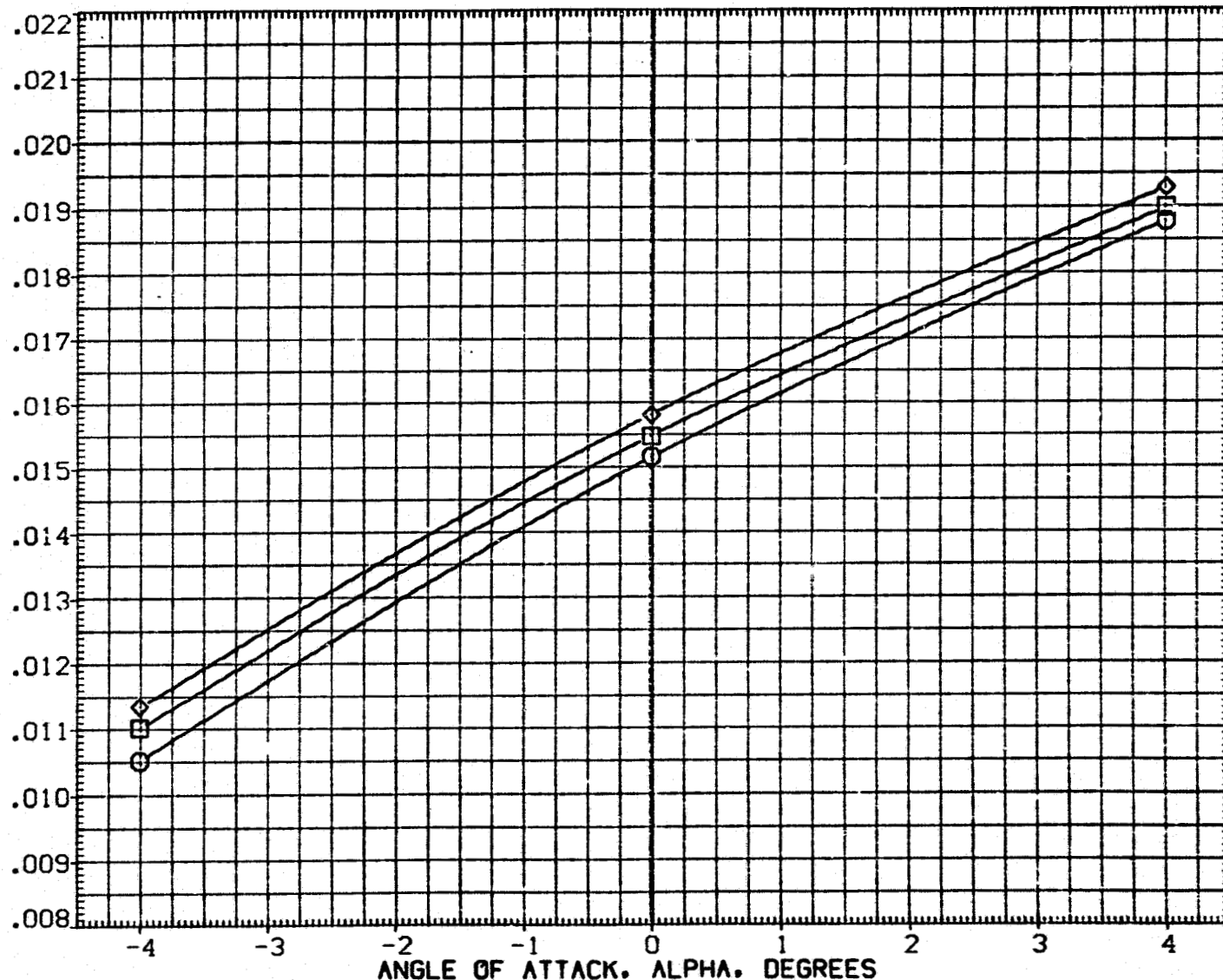


FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4X35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.0000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

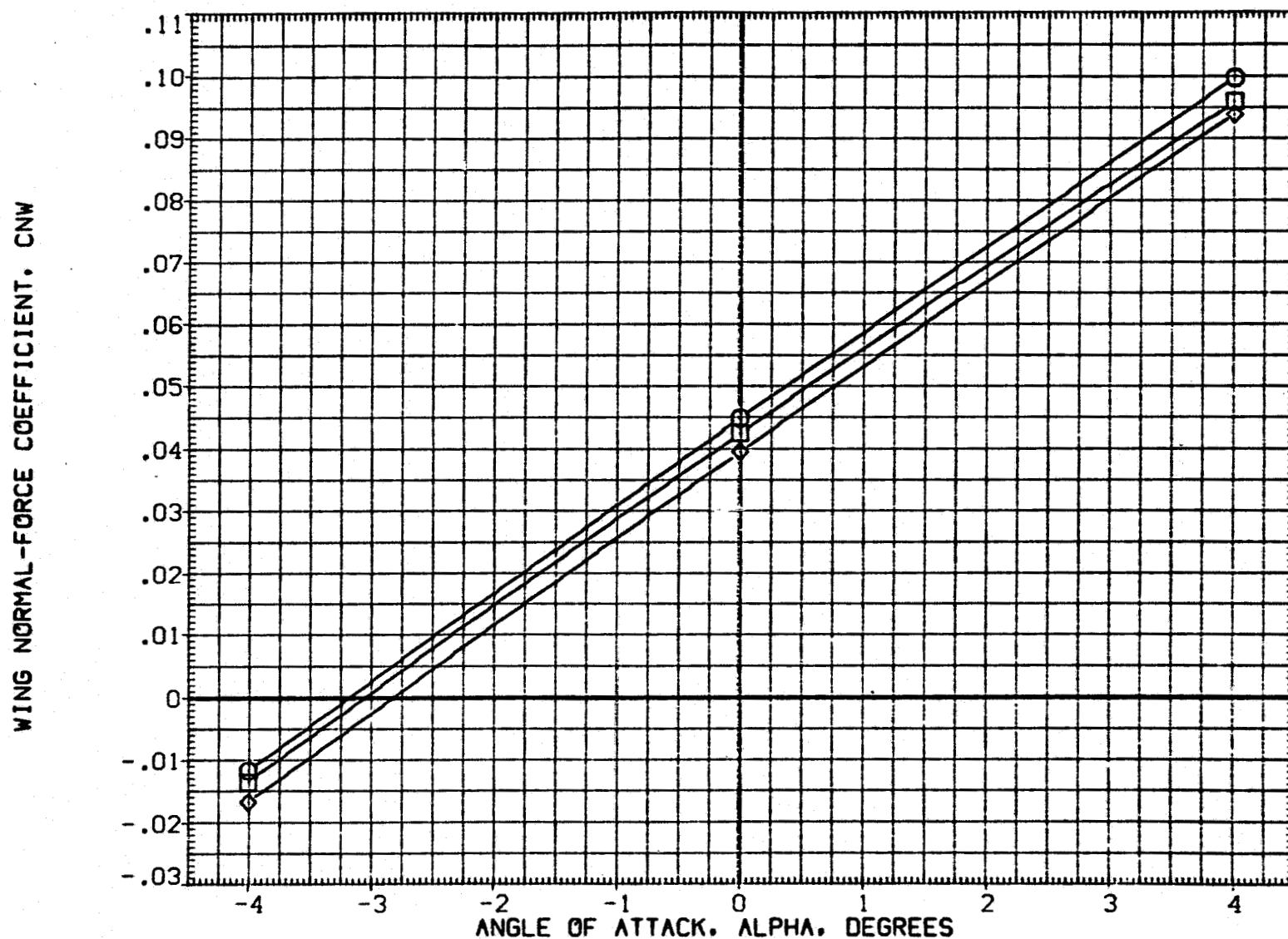


FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X30) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4X43) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4X35) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

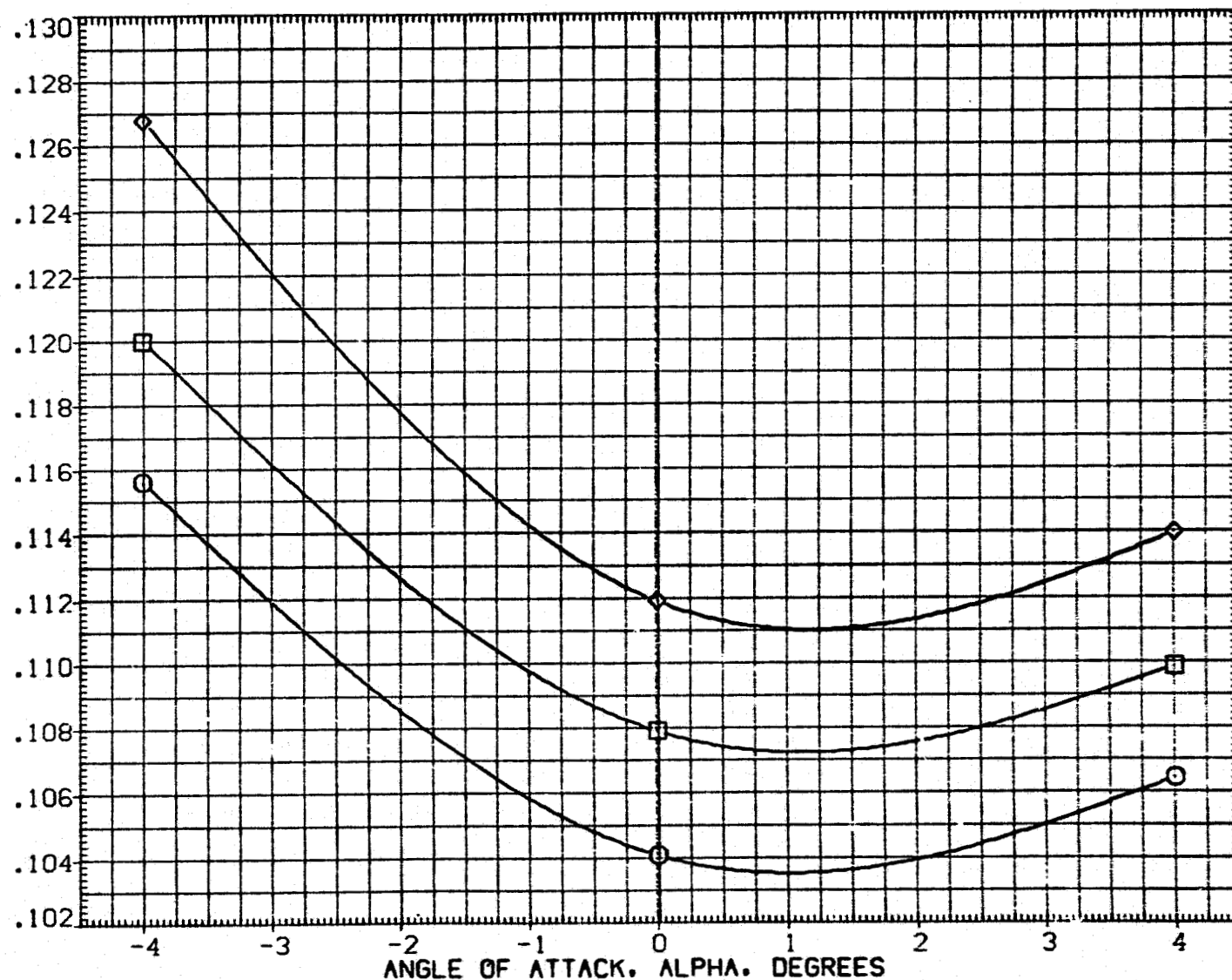


FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(R24X36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(R24X43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(R24X35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

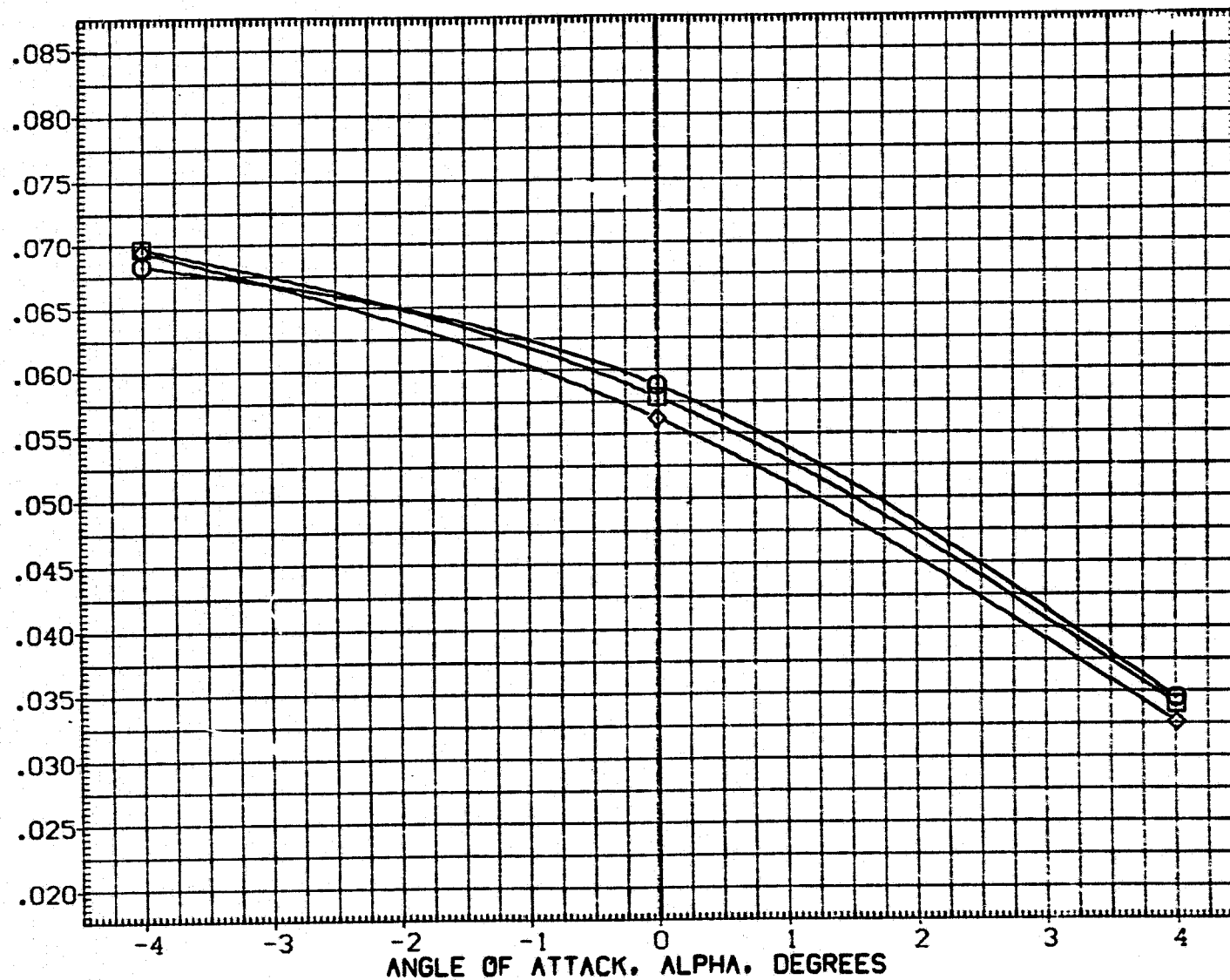


FIG. 96 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X31)	ARC 11-023 1A80 DTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4X44)	ARC 11-023 1A80 DTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000	IN.
(RE4X36)	ARC 11-023 1A80 DTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

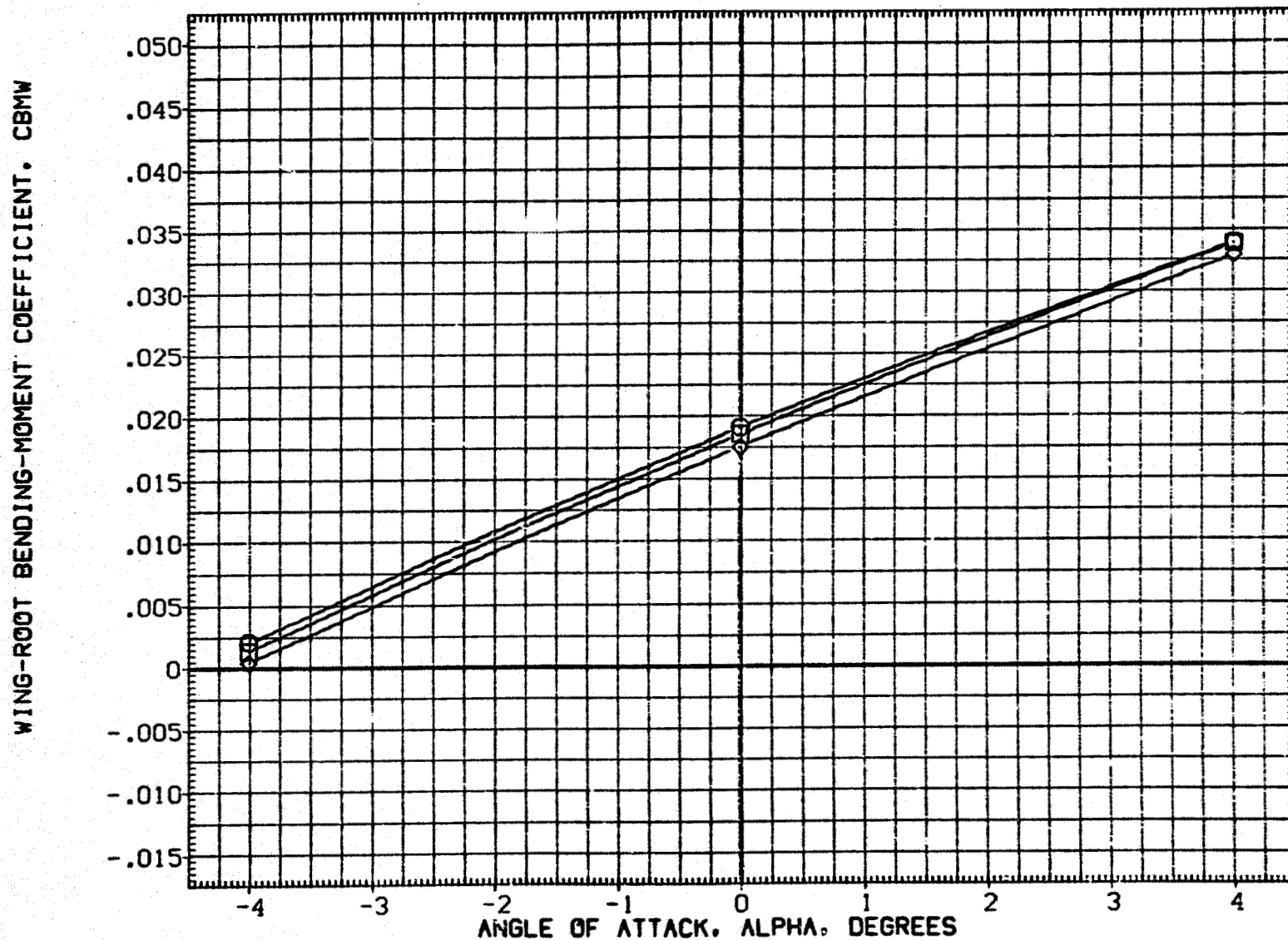


FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000 IN.
(RE4X36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

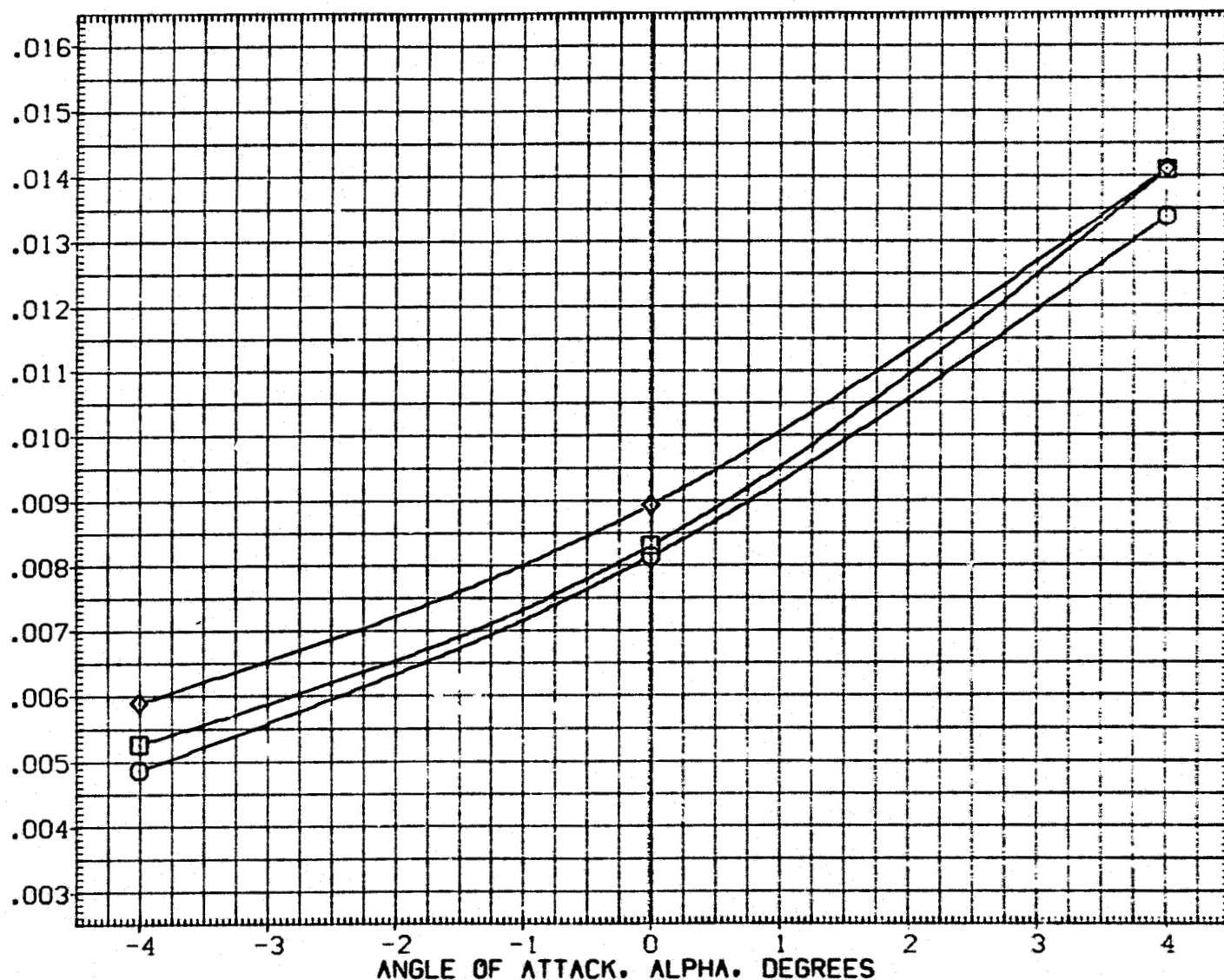


FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X44) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X36) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
.000	.000	1.250	3.250	LREF	1290.3000 IN.
.000	.000	1.250	2.250	BREF	1250.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

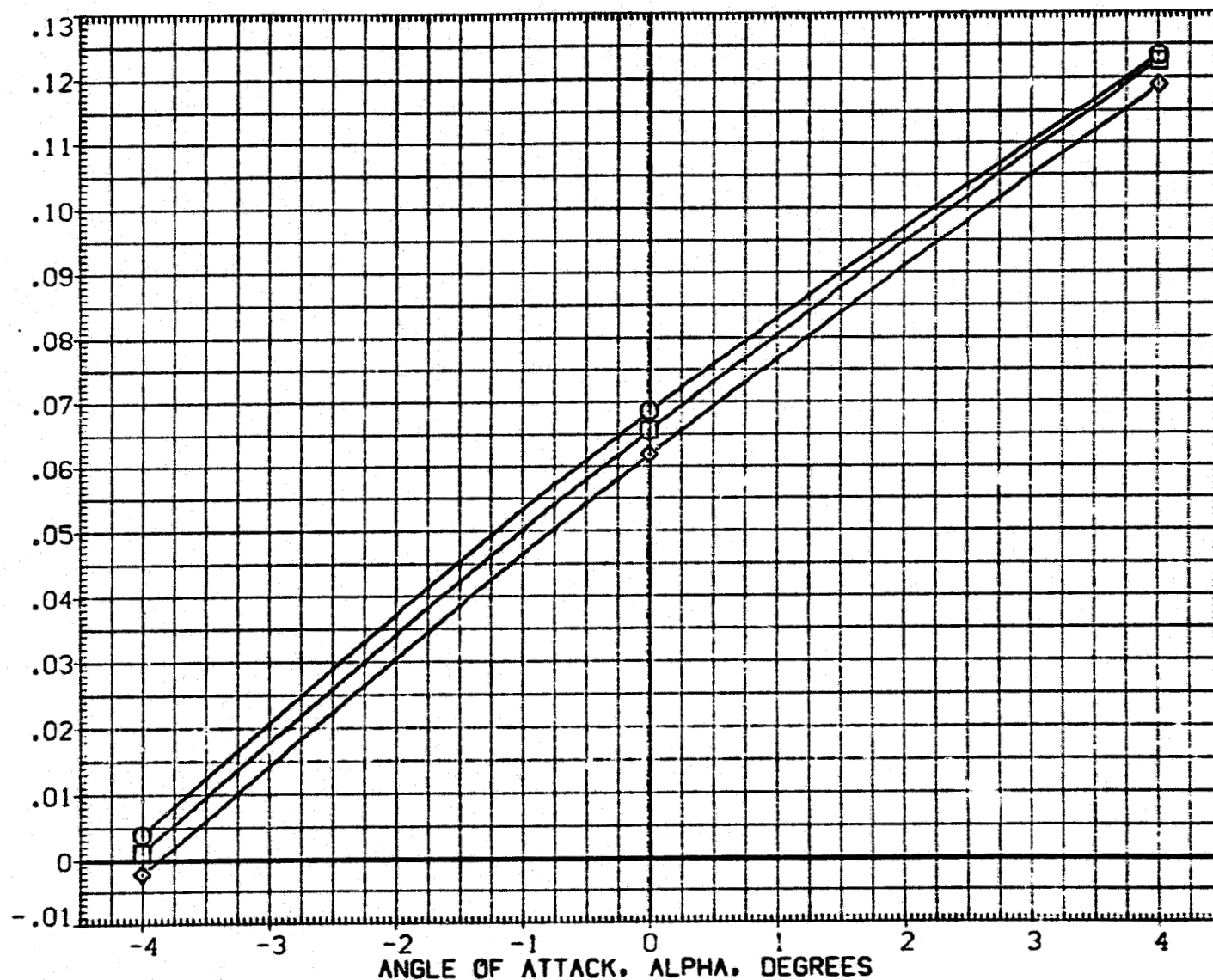


FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4X44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000 IN.
(RE4X36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

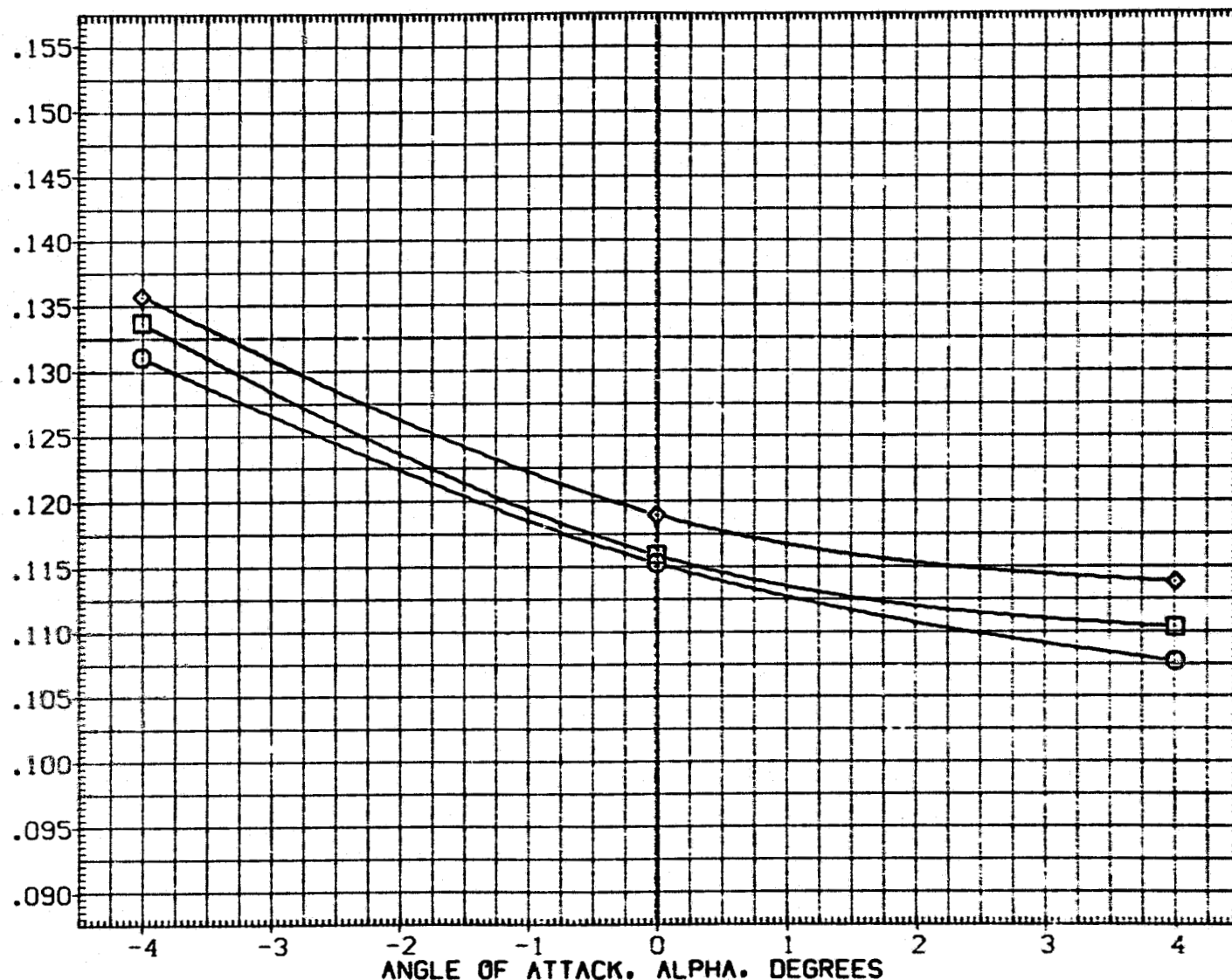


FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4X31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4X36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
.000	.000	1.250	3.250	LREF	1290.3000 IN.
.000	.000	1.250	2.250	BREF	1290.3000 IN.
				XMRP	.0000 IN.
				YMRP	.0000 IN.
				ZMRP	.0000 IN.
				SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

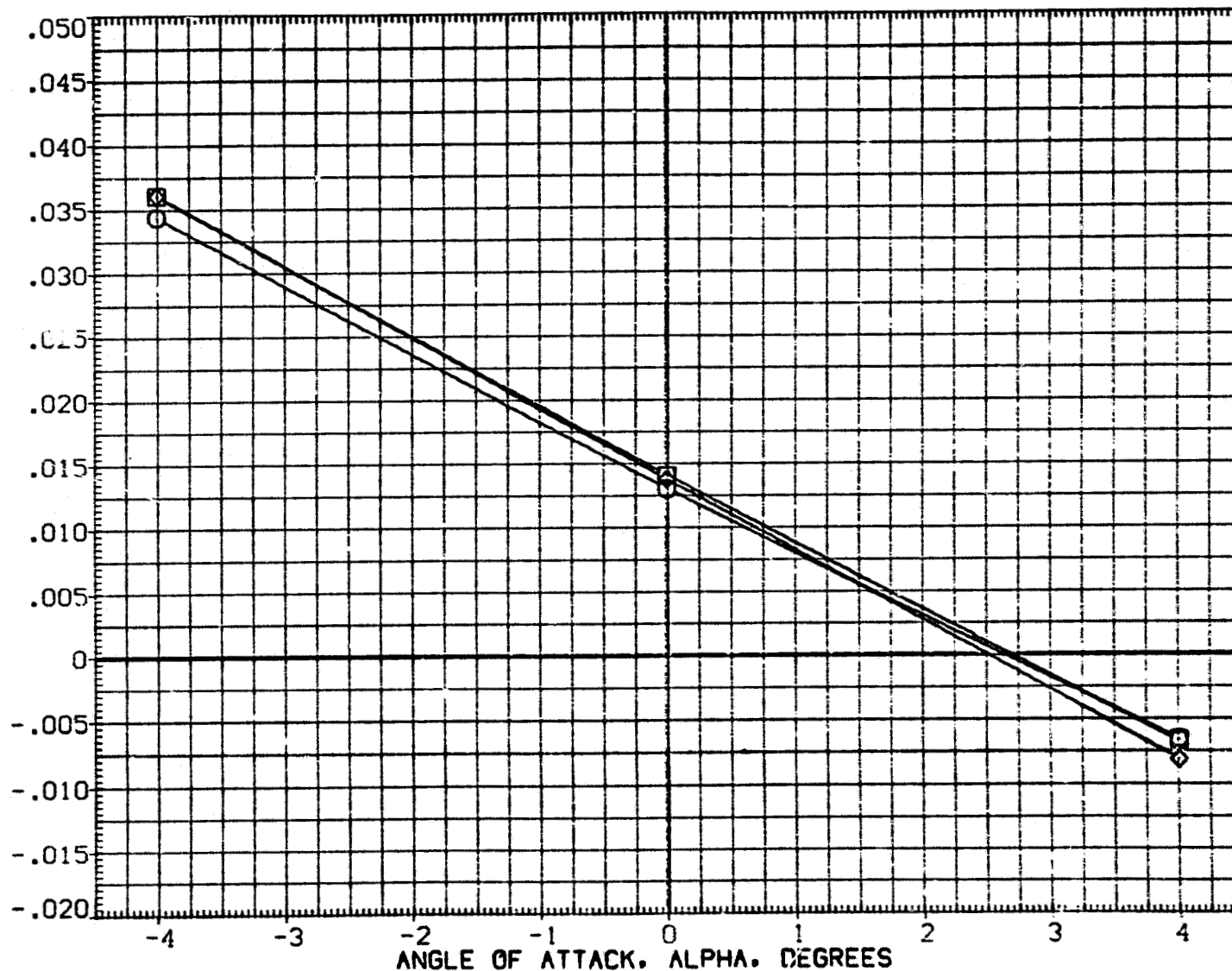


FIG. 97 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.25 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4X45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4X37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT. CBMW

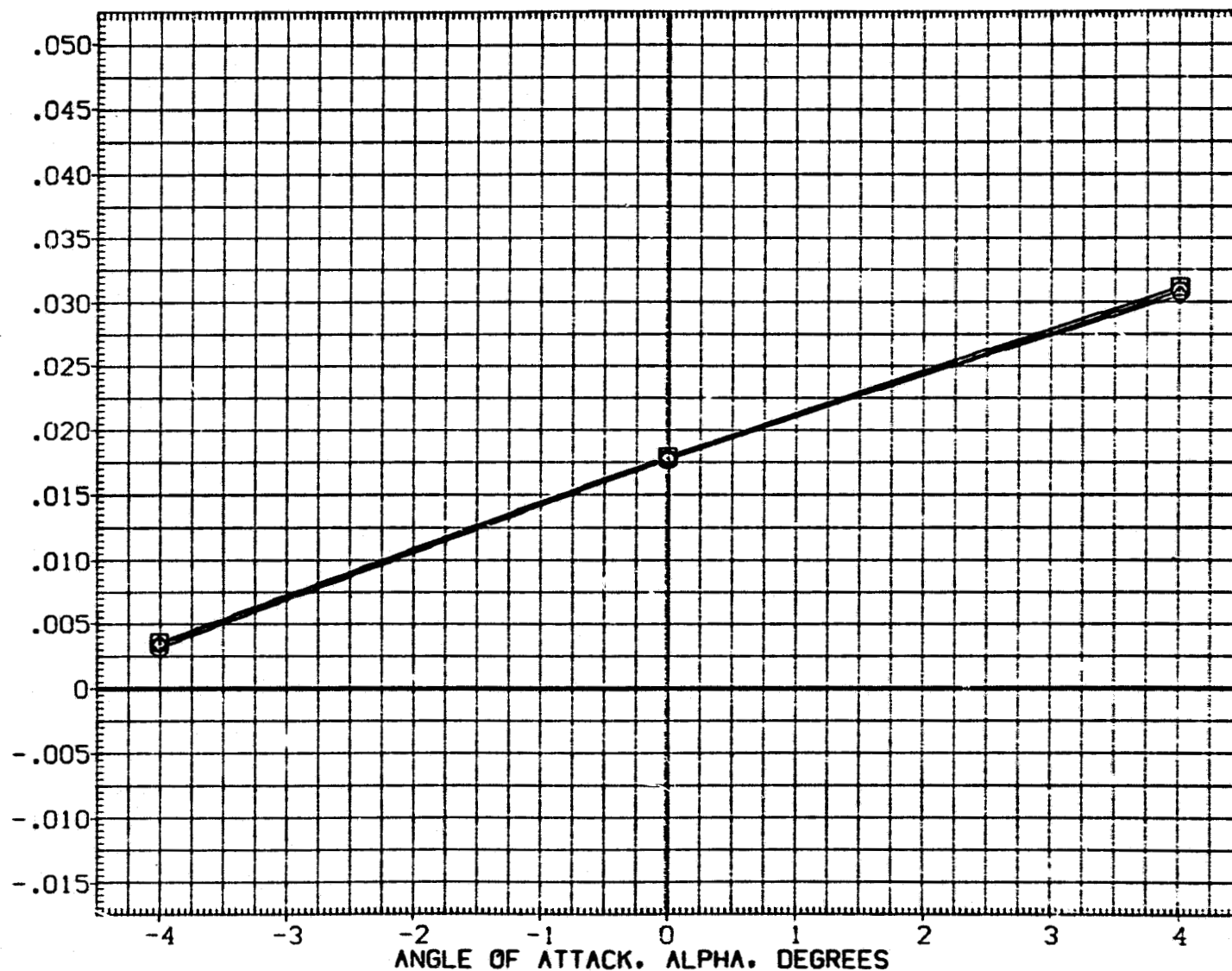


FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	50.FT.
(RE4X45) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4X37) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0003	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

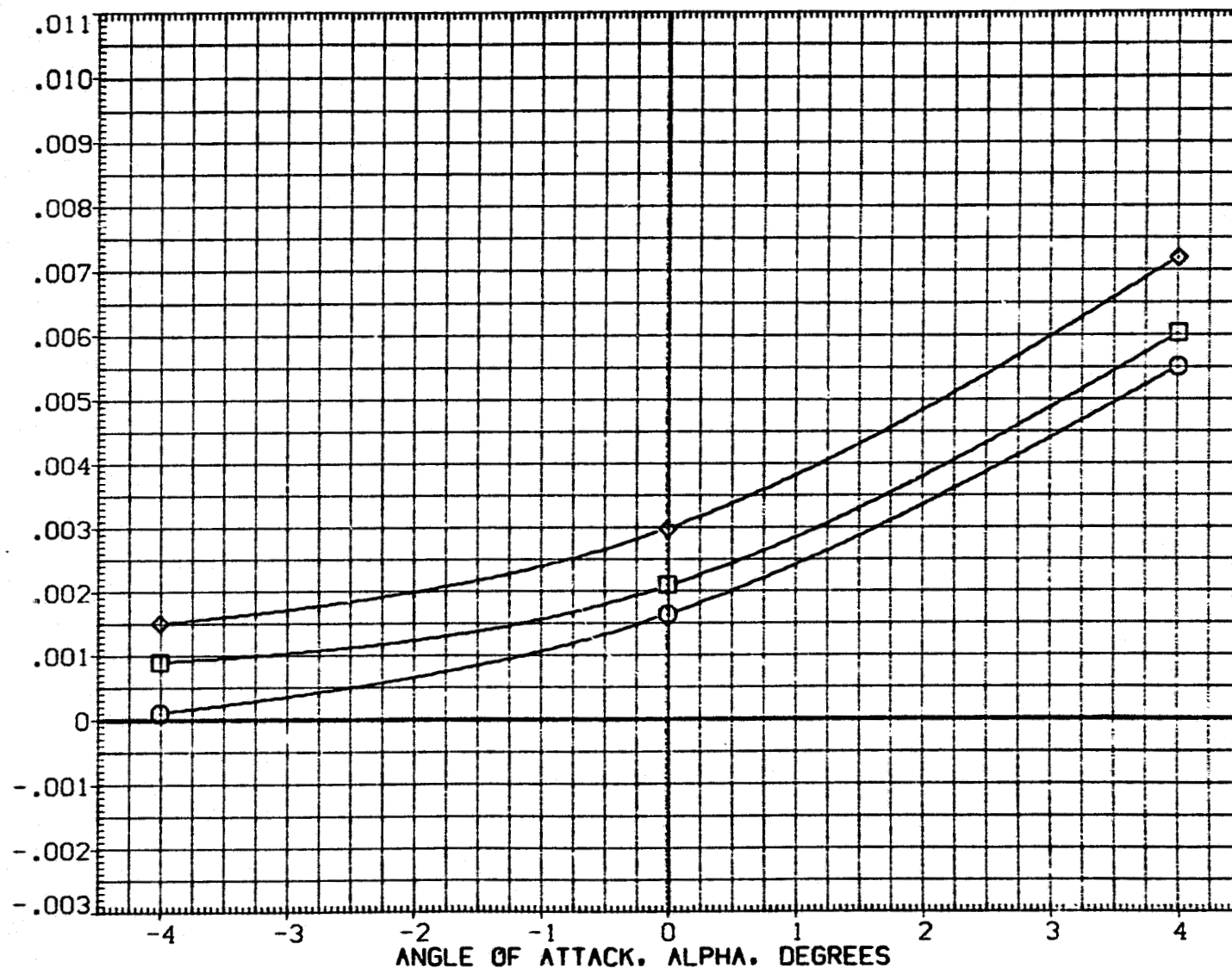


FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4X45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4X37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XM7P	.0000 IN.
						YMKP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

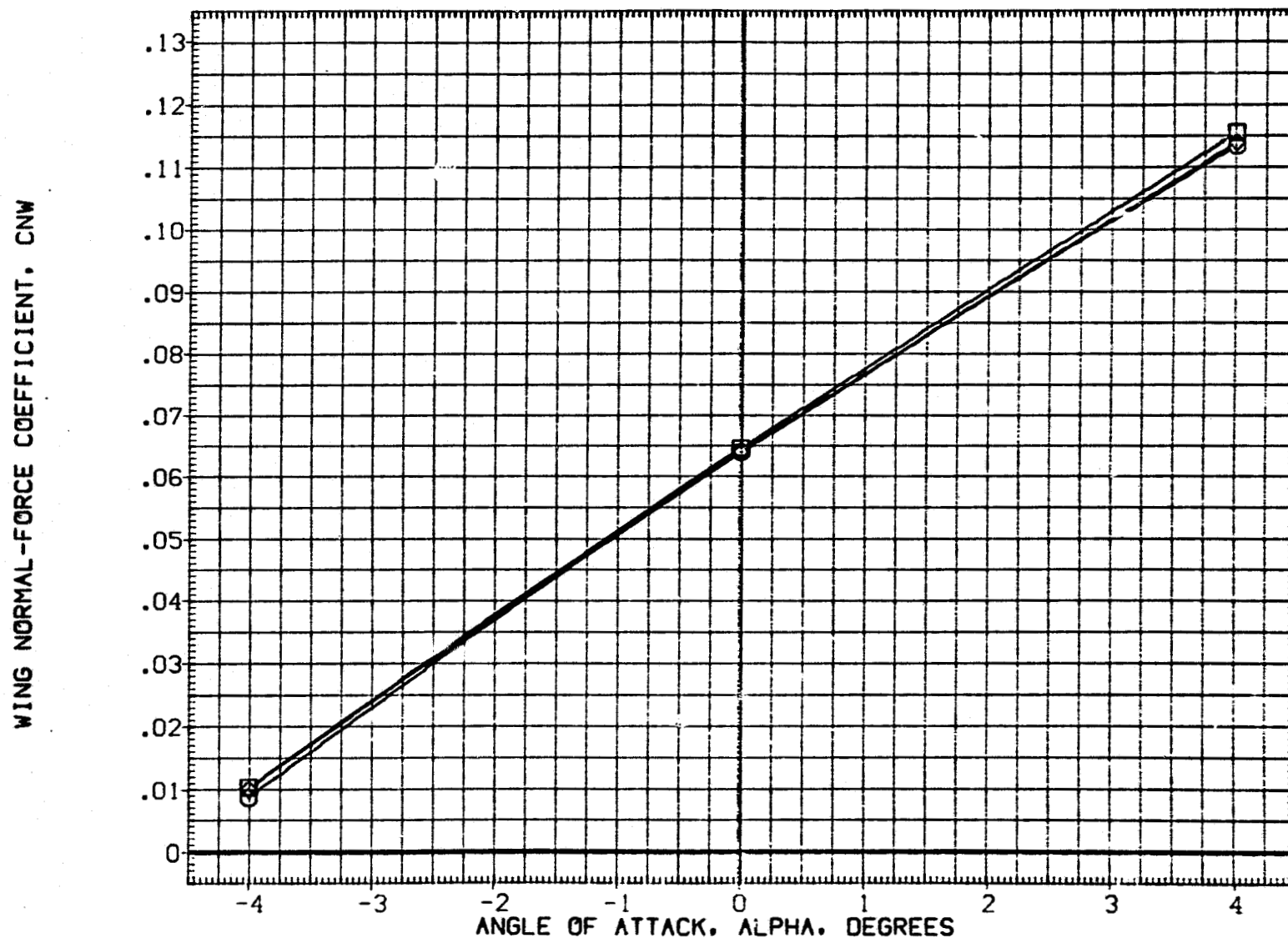


FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4X45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4X37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

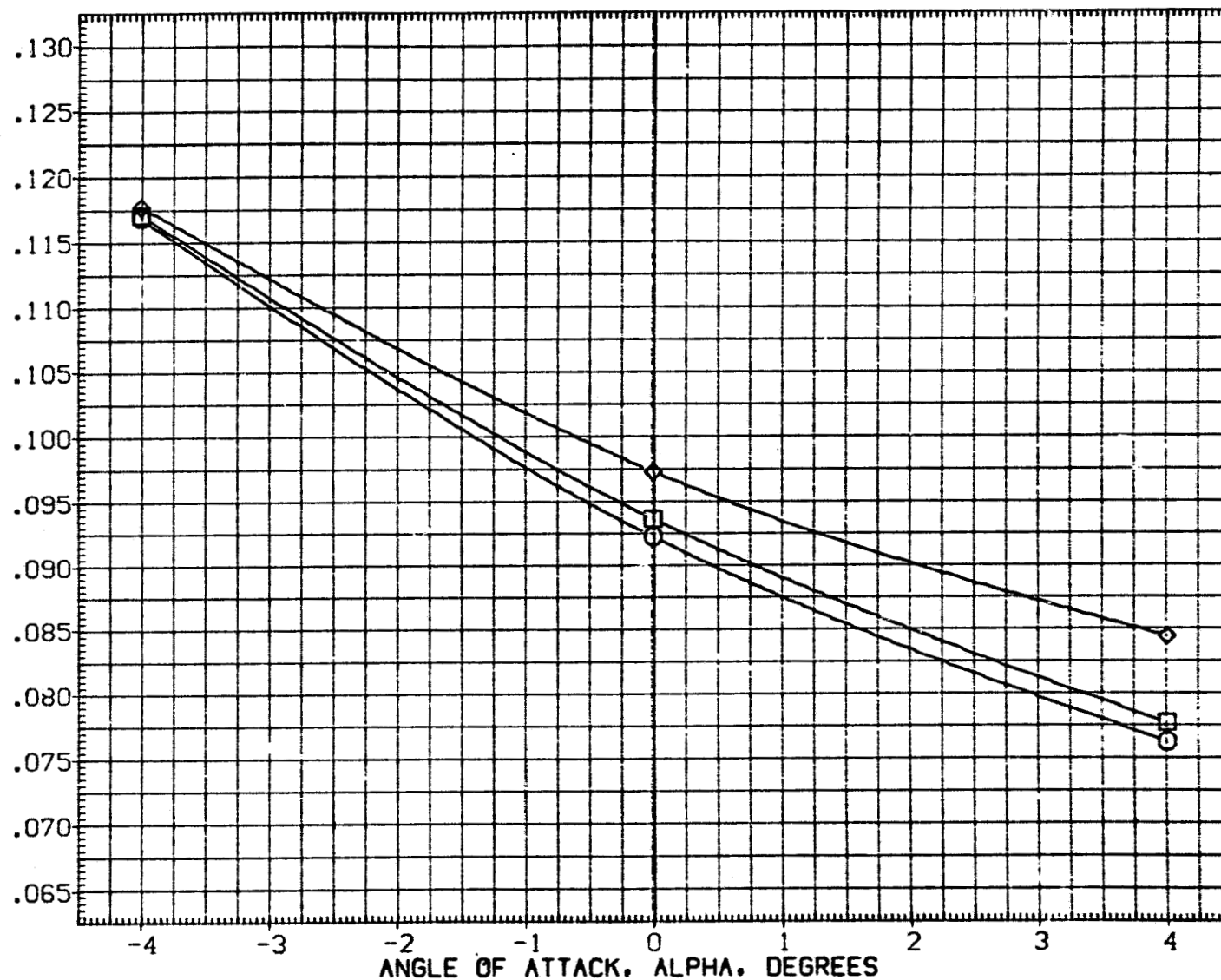





FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X32) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4X45) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4X37) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

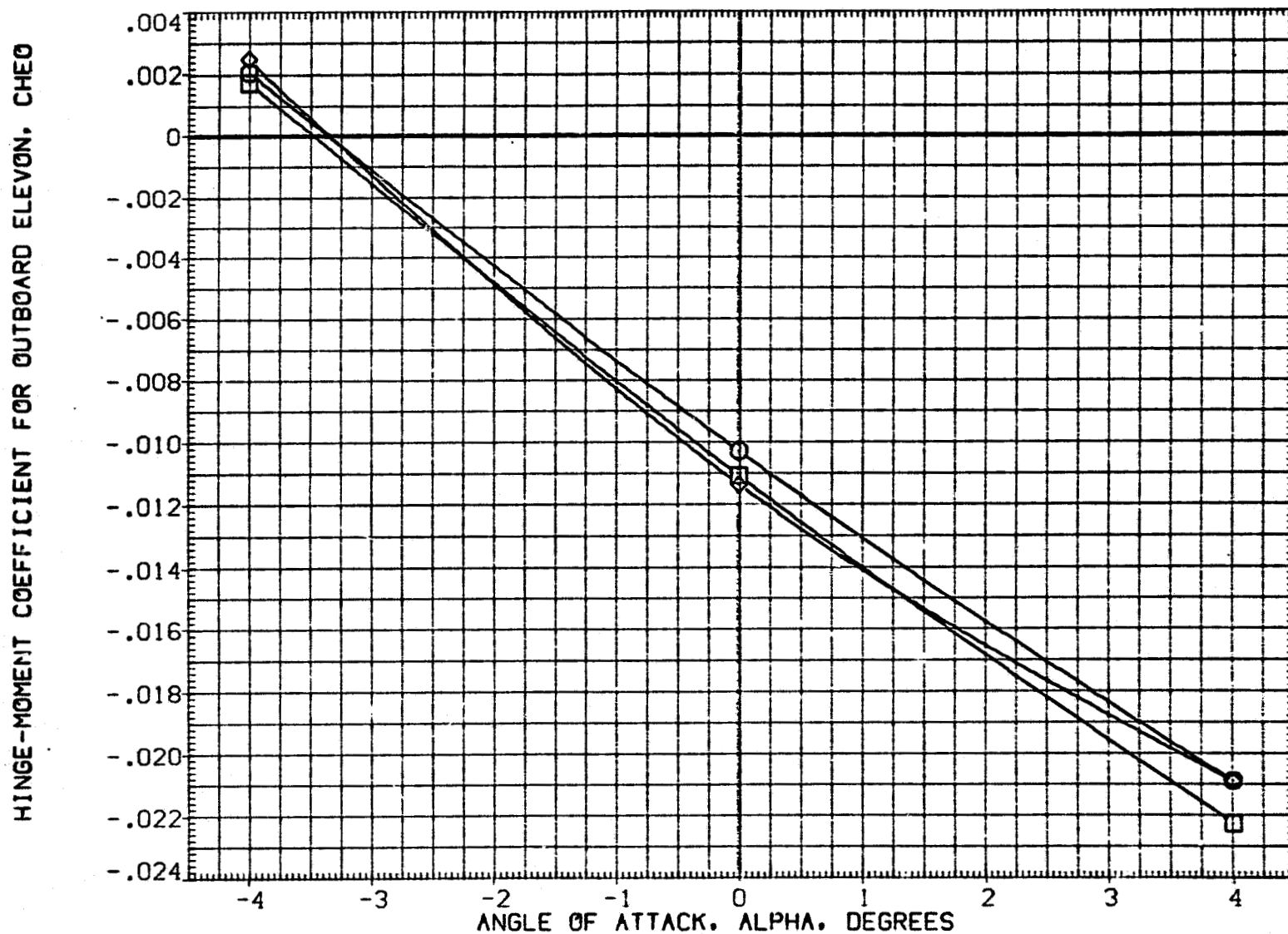


FIG. 98 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.4 PLUMES OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

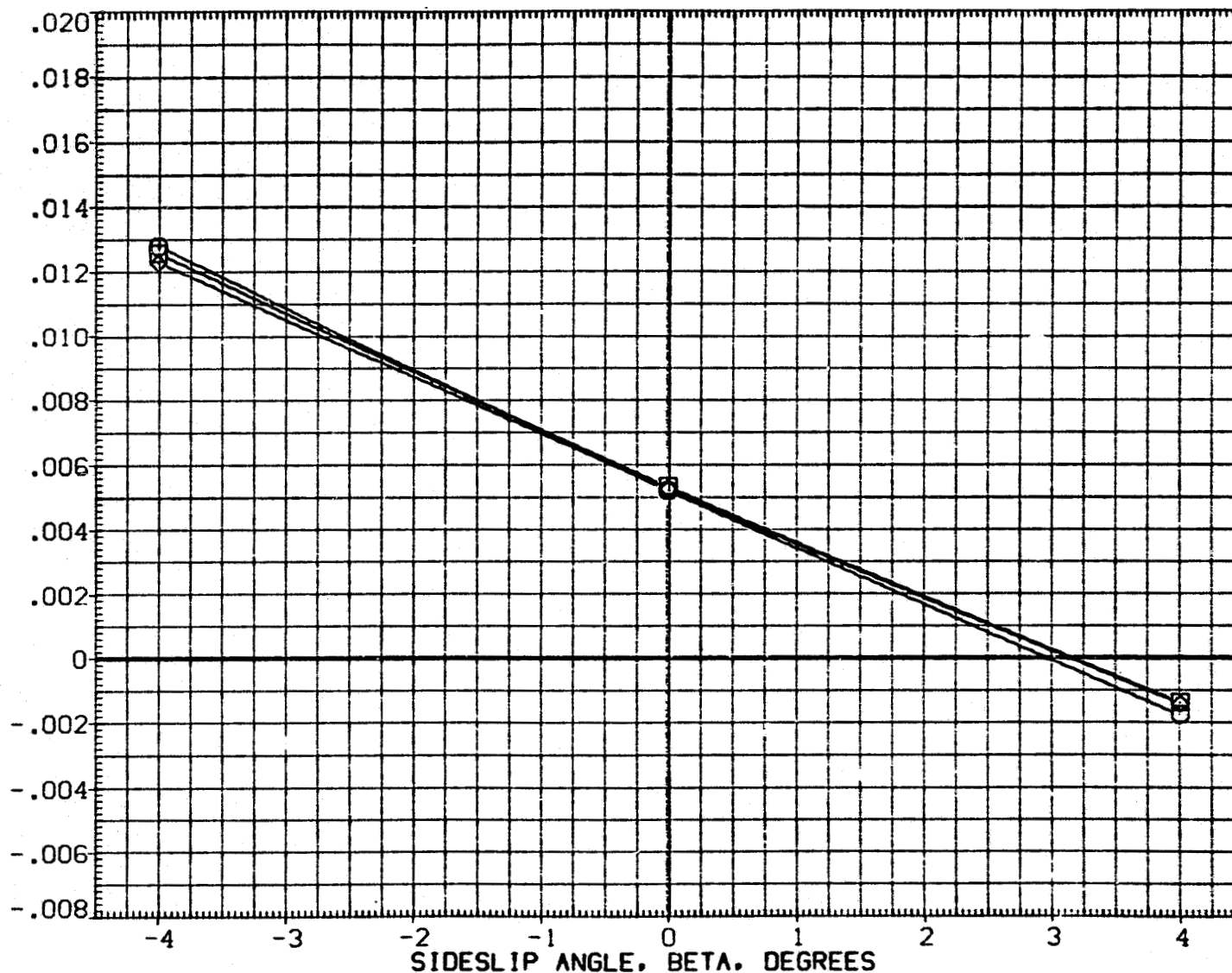


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
.000	.000	.600	3.400	SREF 2690.0000 SQ.FT.
.000	.000	.600	2.500	LREF 1290.3000 IN.
.000	.000	.600	1.750	BREF 1290.3000 IN.
				XMRP .0000 IN.
				YMRP .0000 IN.
				ZMRP .0000 IN.
				SCALE .0200

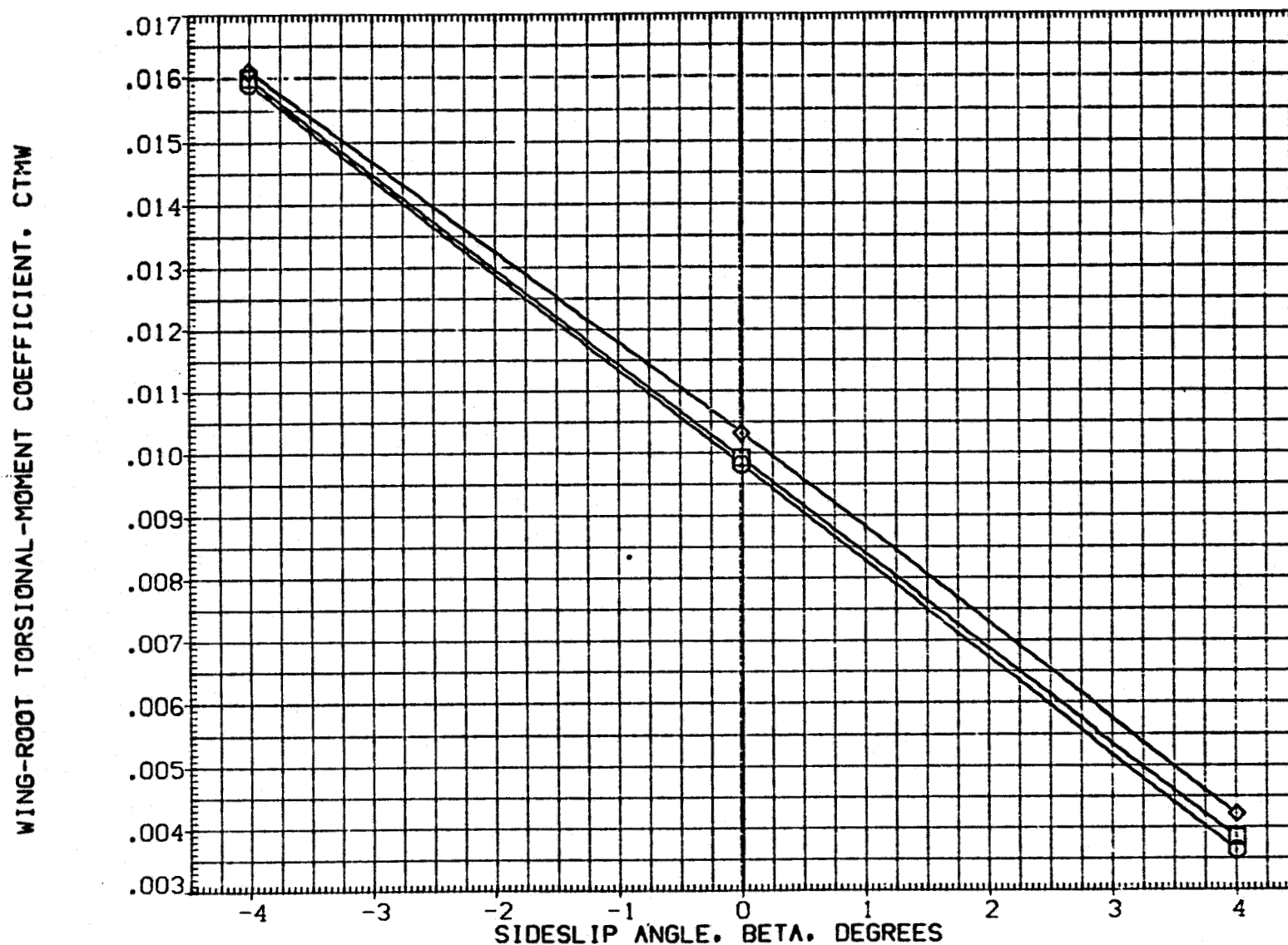


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

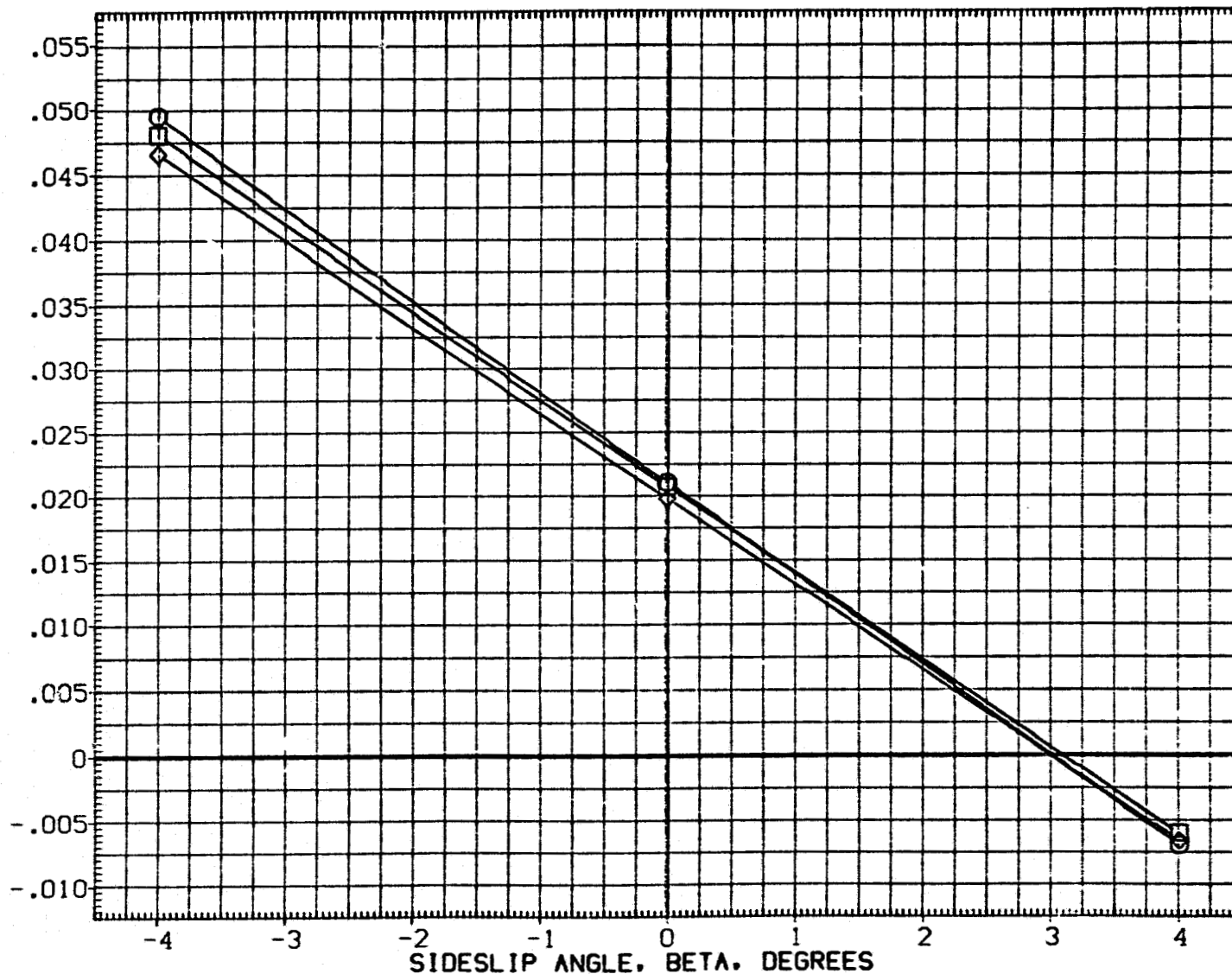


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

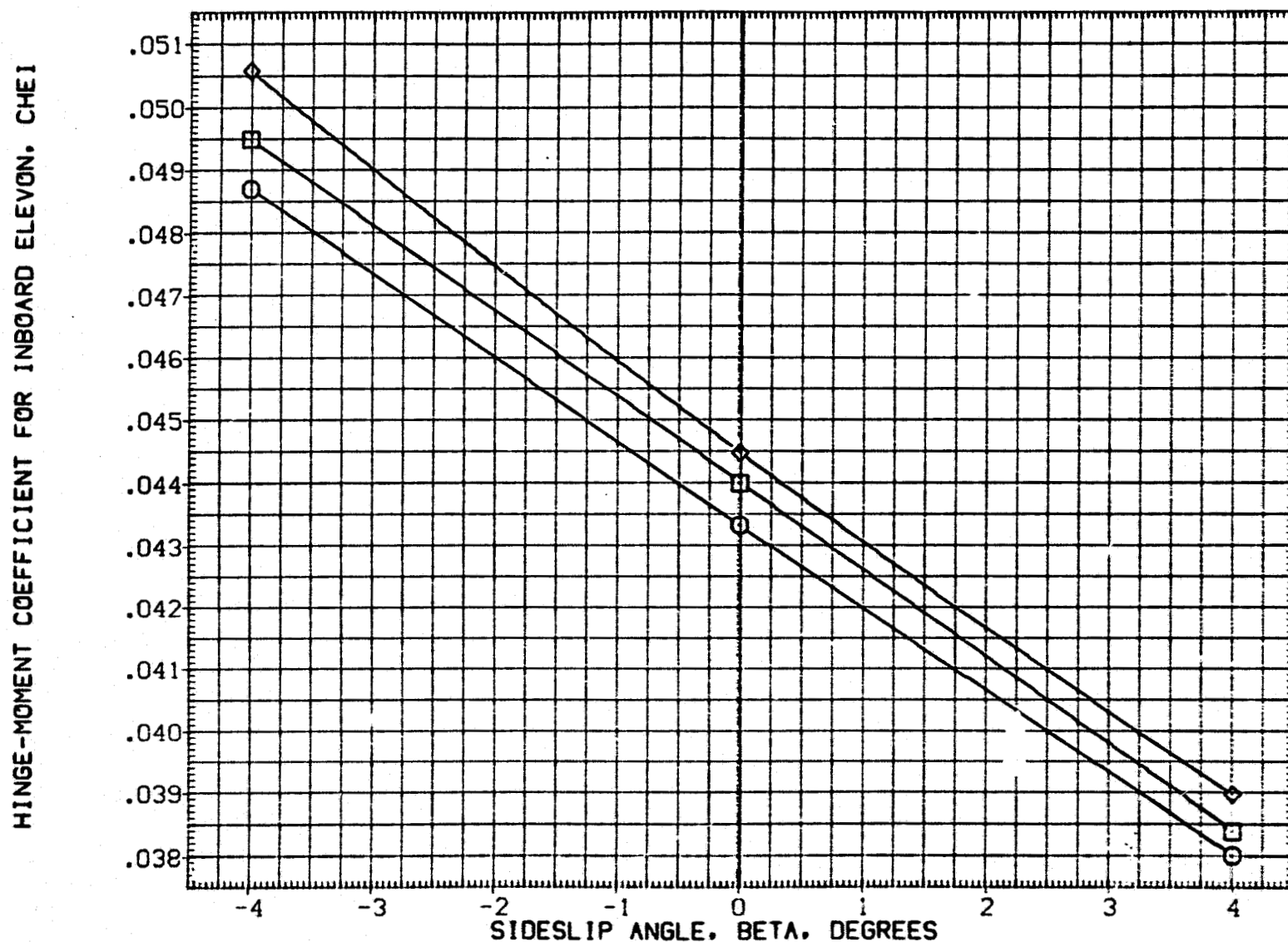


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y41) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y33) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

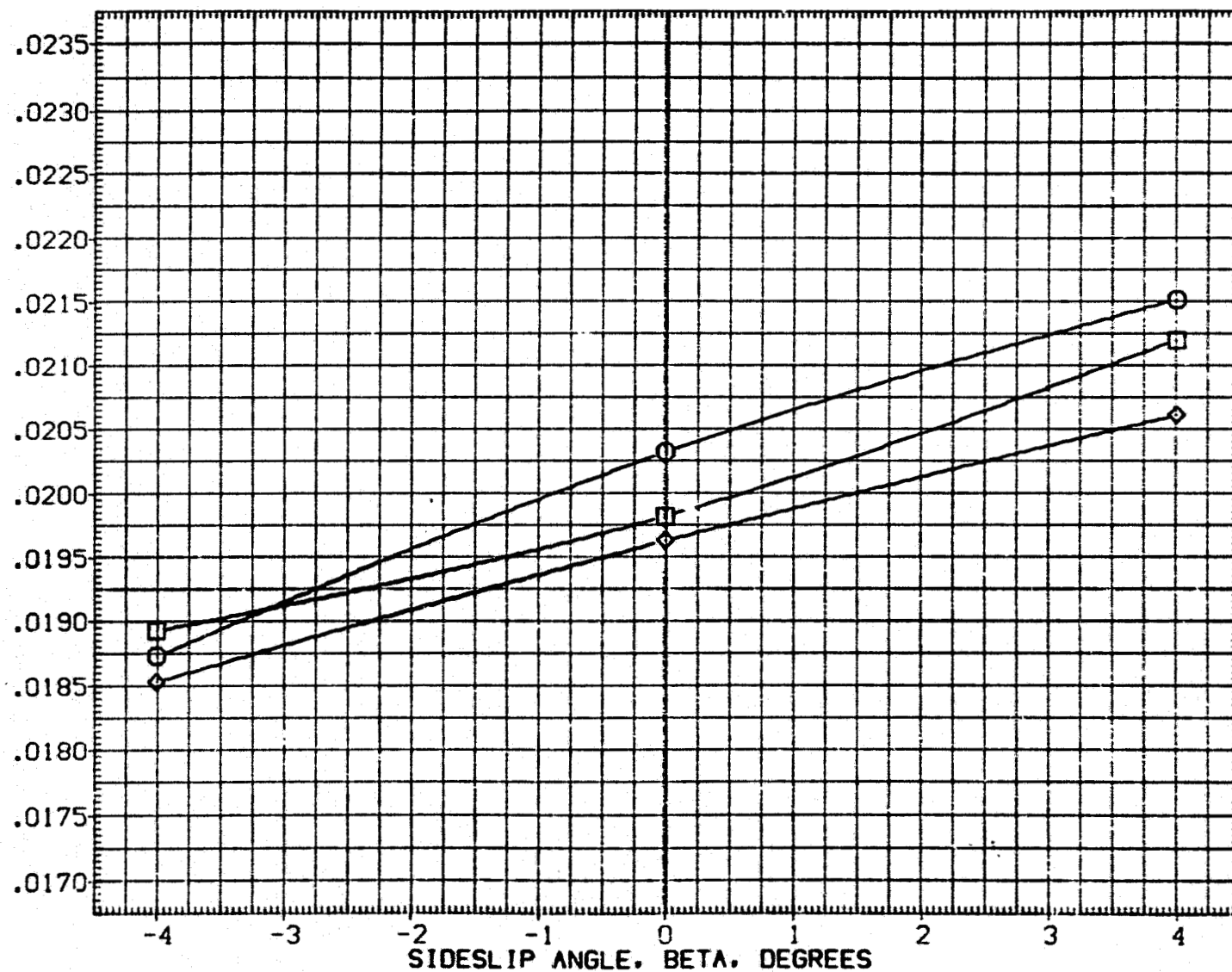


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

VERTICAL-TAIL BENDING-MOMENT COEFFICIENT, CBMV

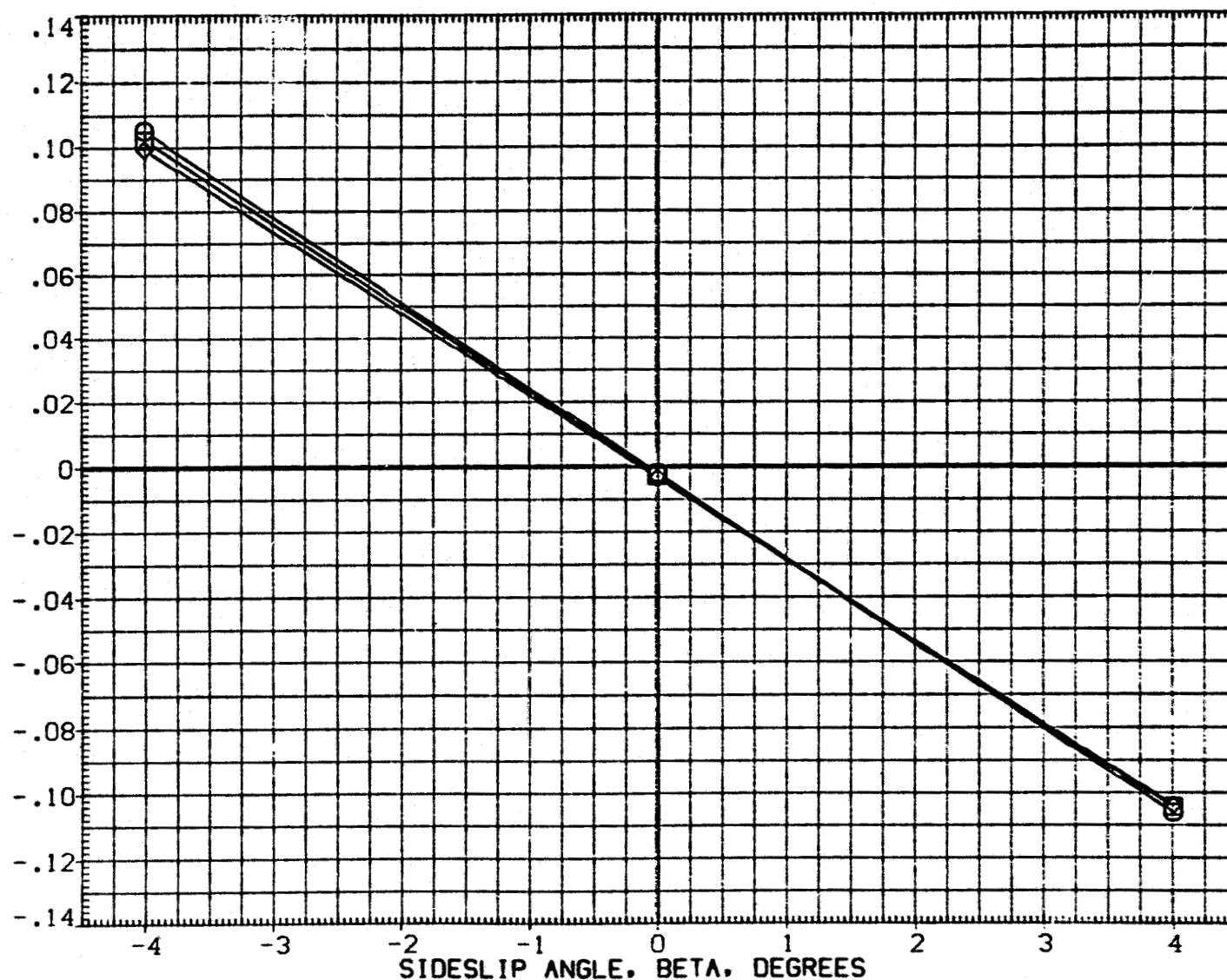


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

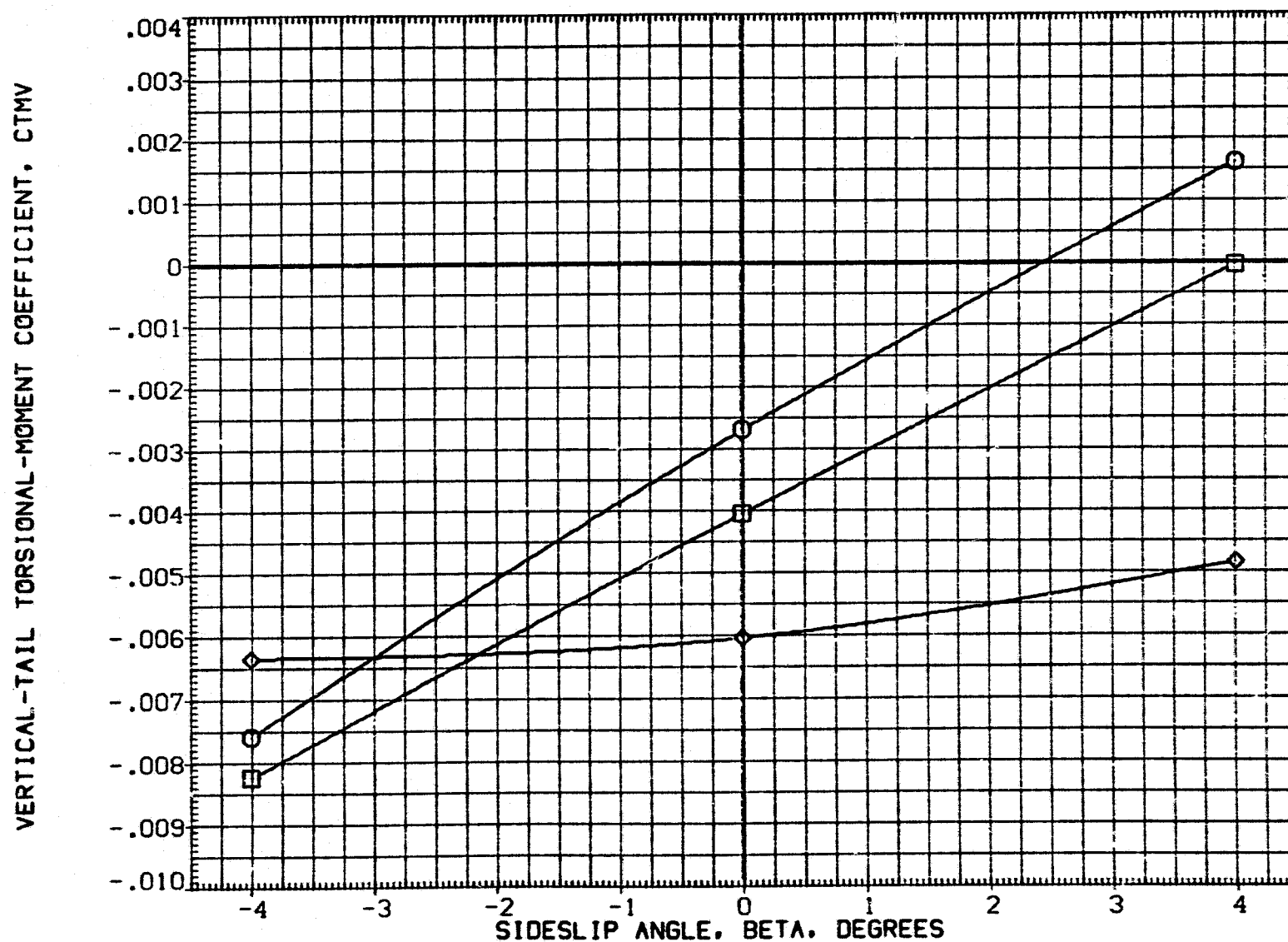


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

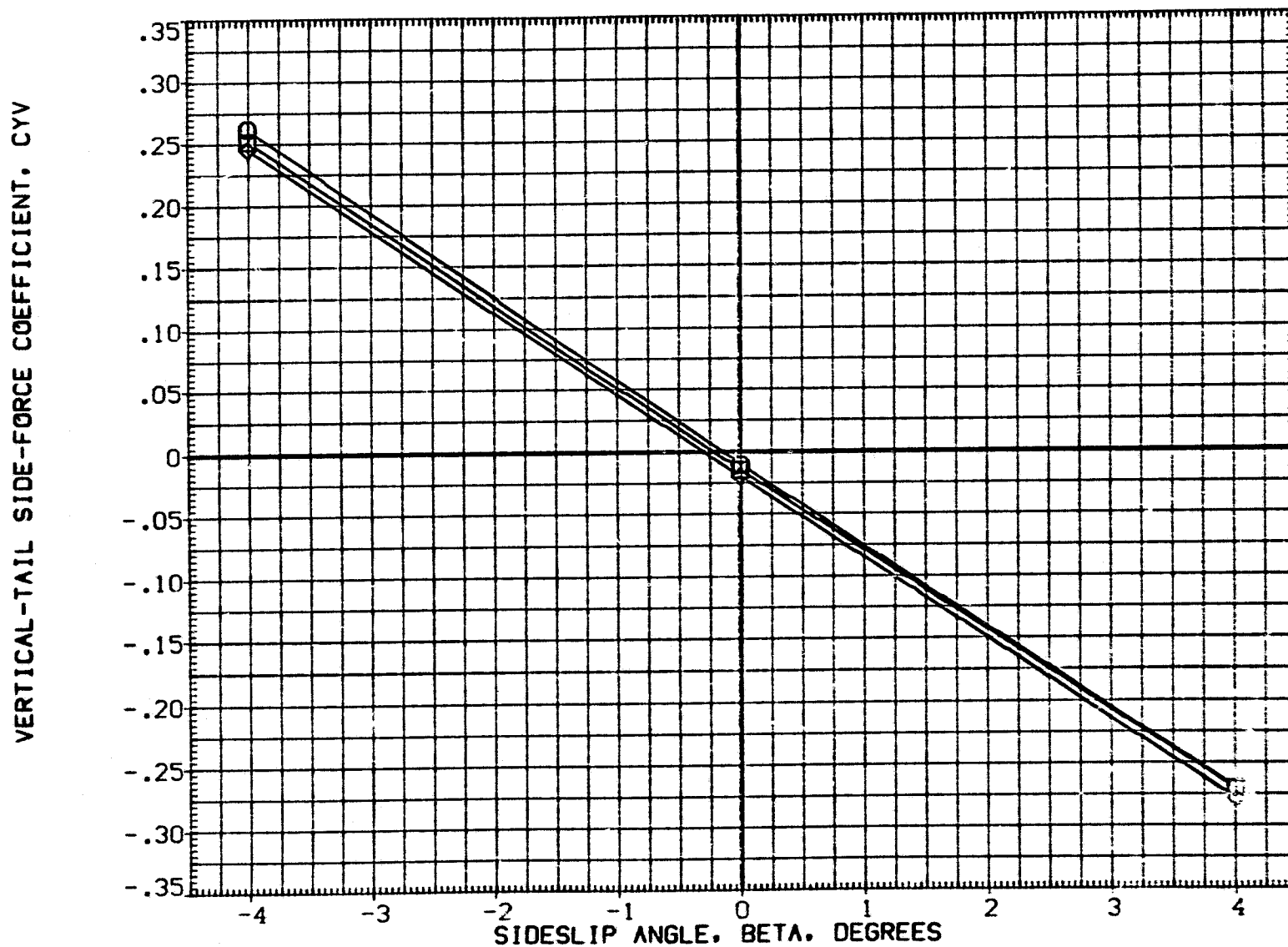


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y41)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y33)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

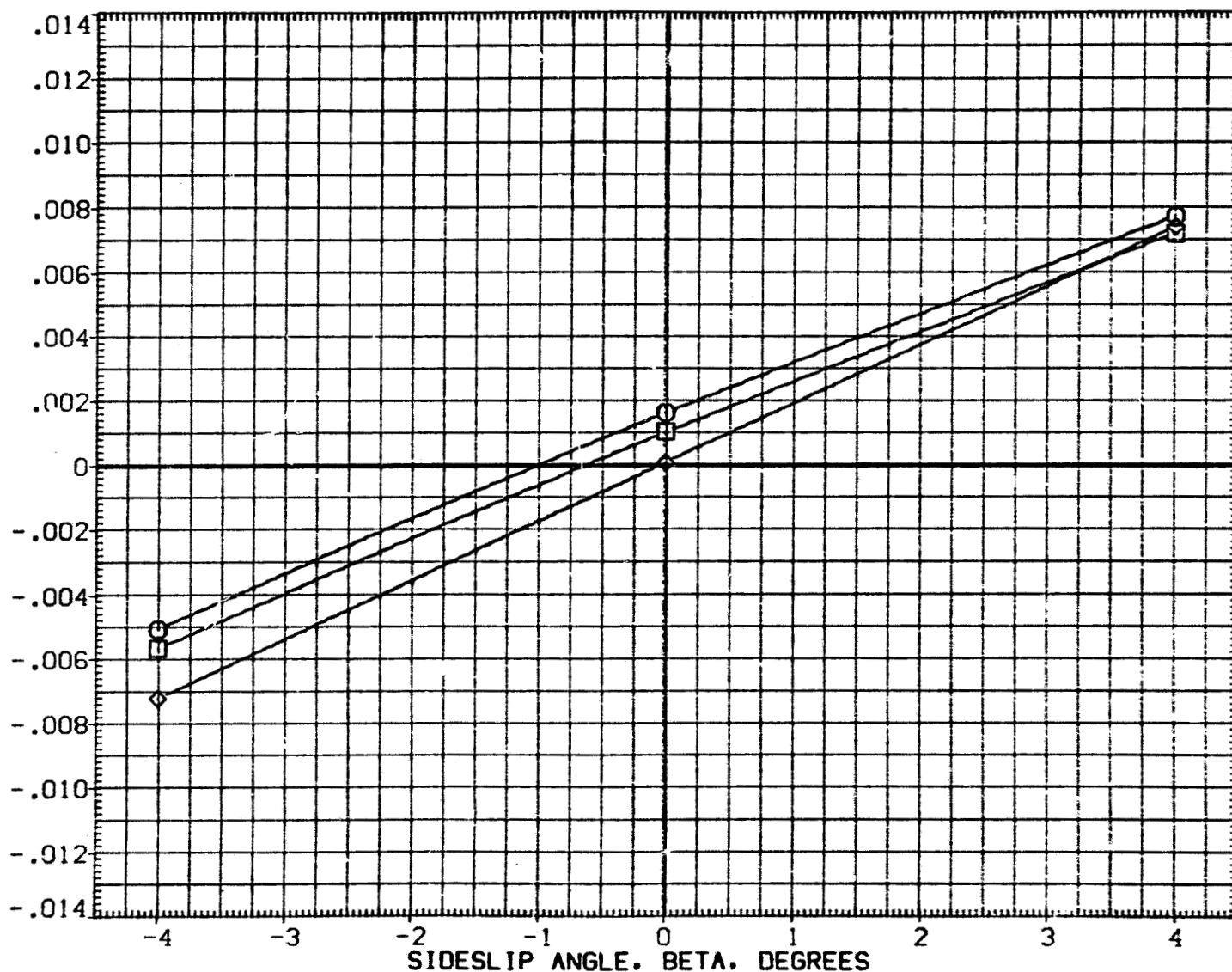


FIG. 99 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4Y34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

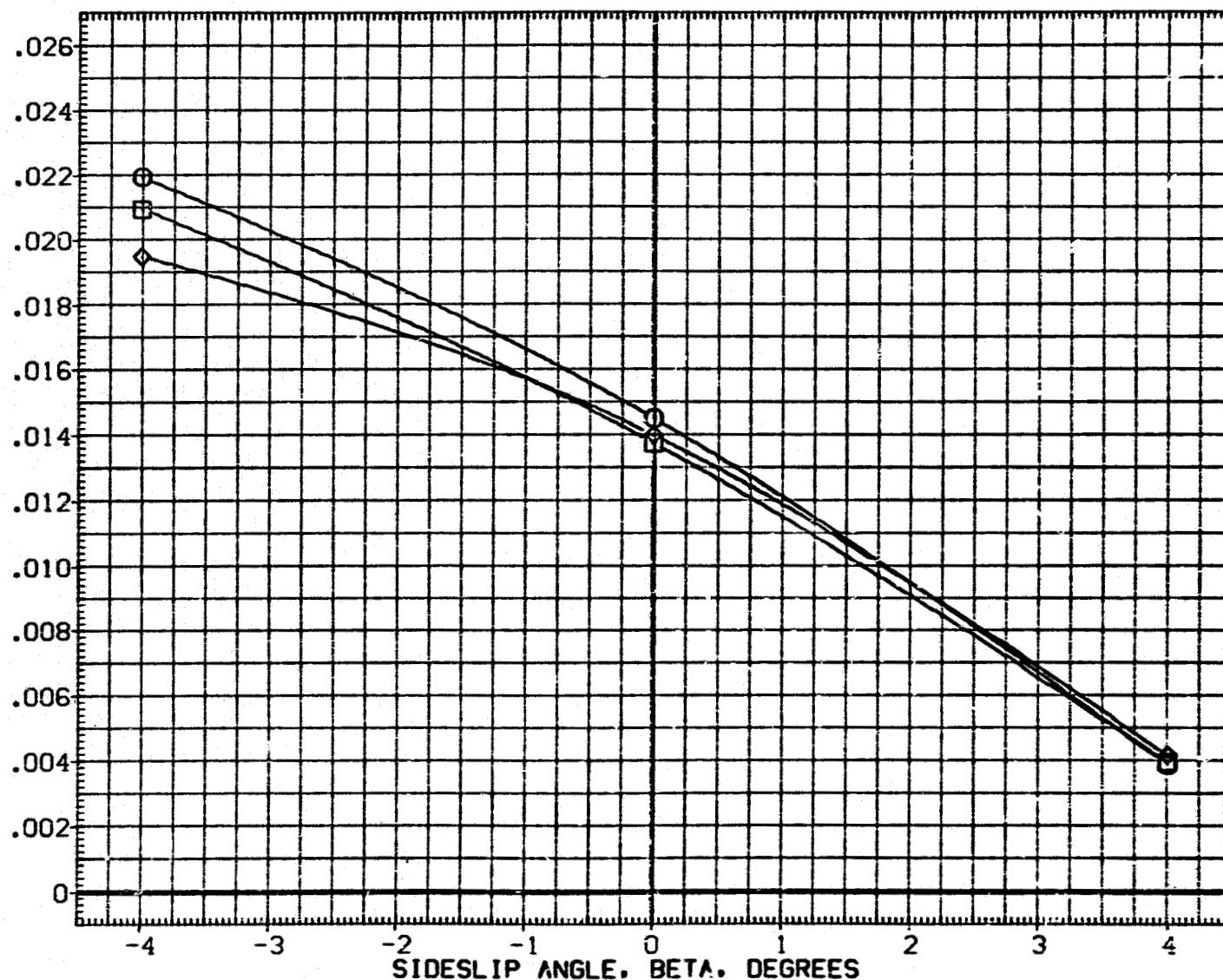


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

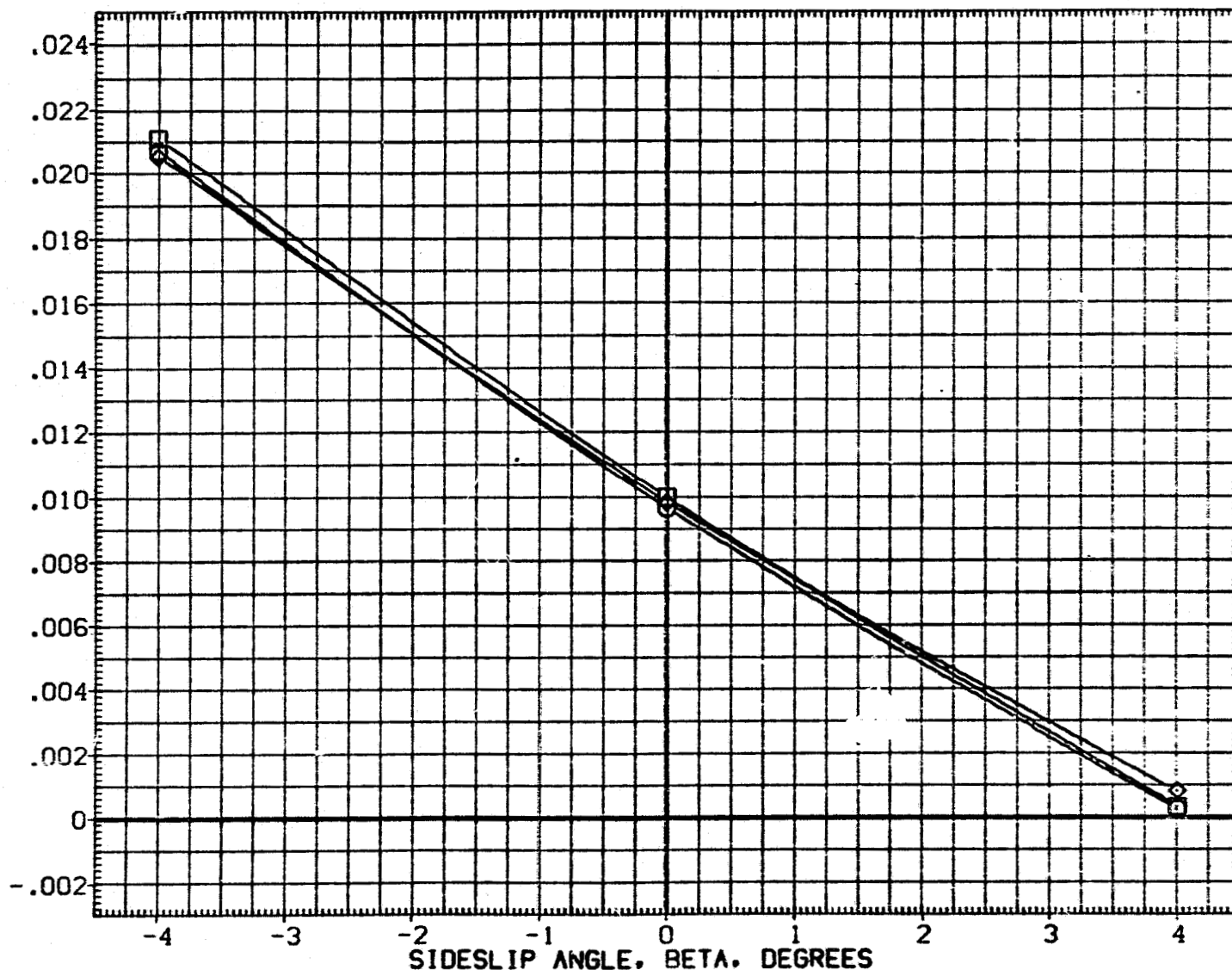


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y42)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y34)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
							XMRP	.0000	IN.
							YMRP	.0000	IN.
							ZMRP	.0000	IN.
							SCALE	.0200	

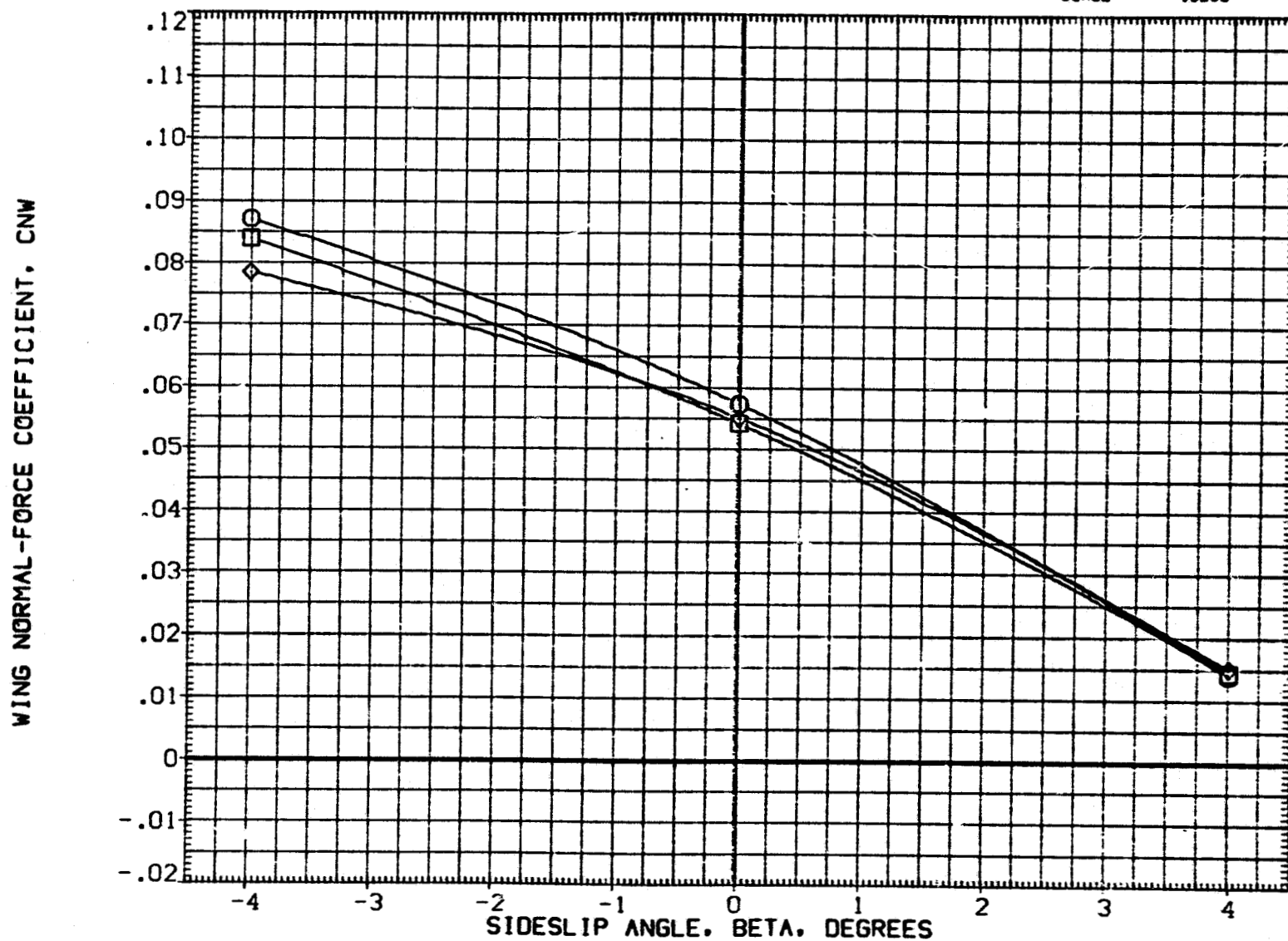


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4Y42) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y34) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

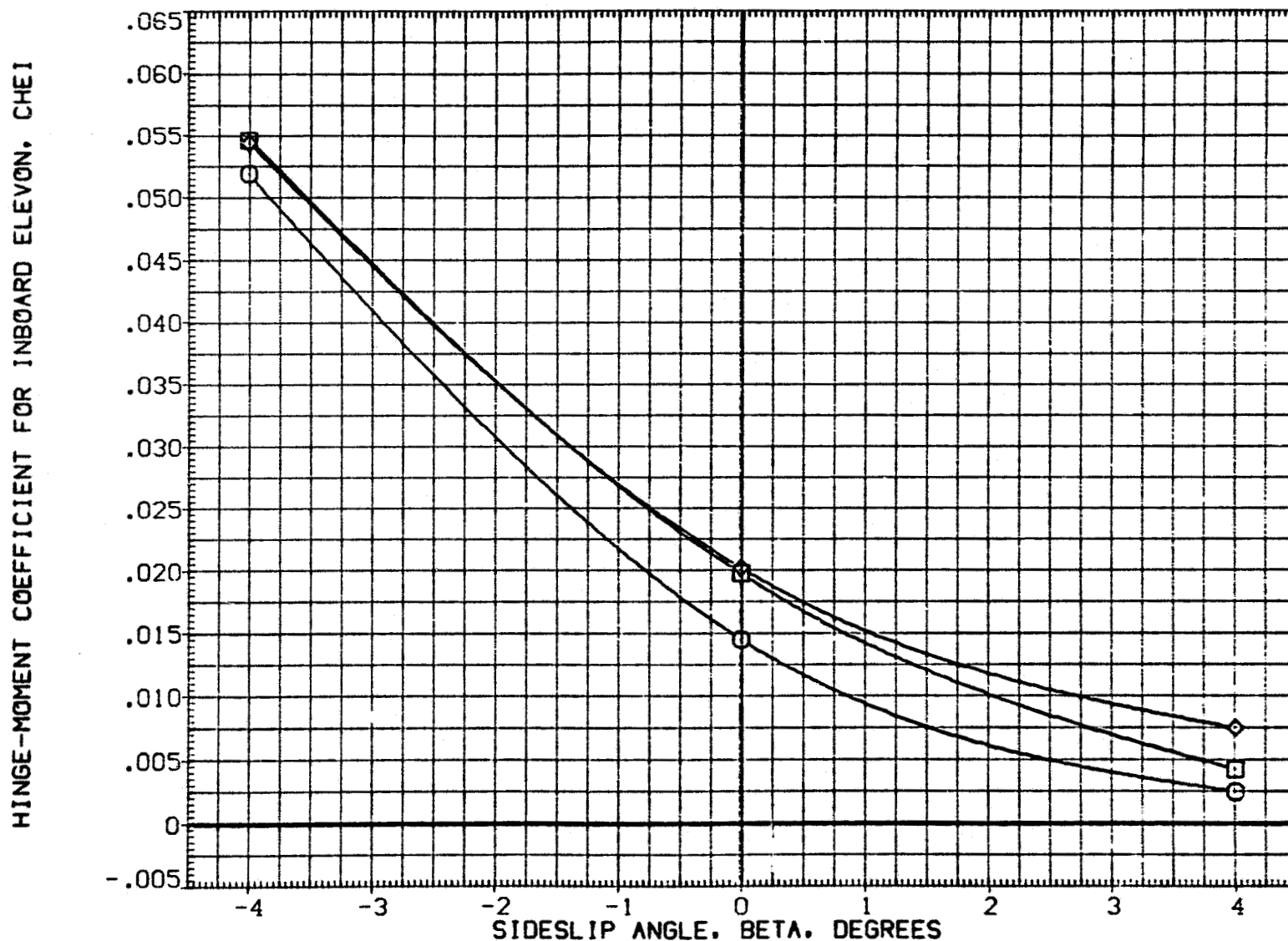


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4Y34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

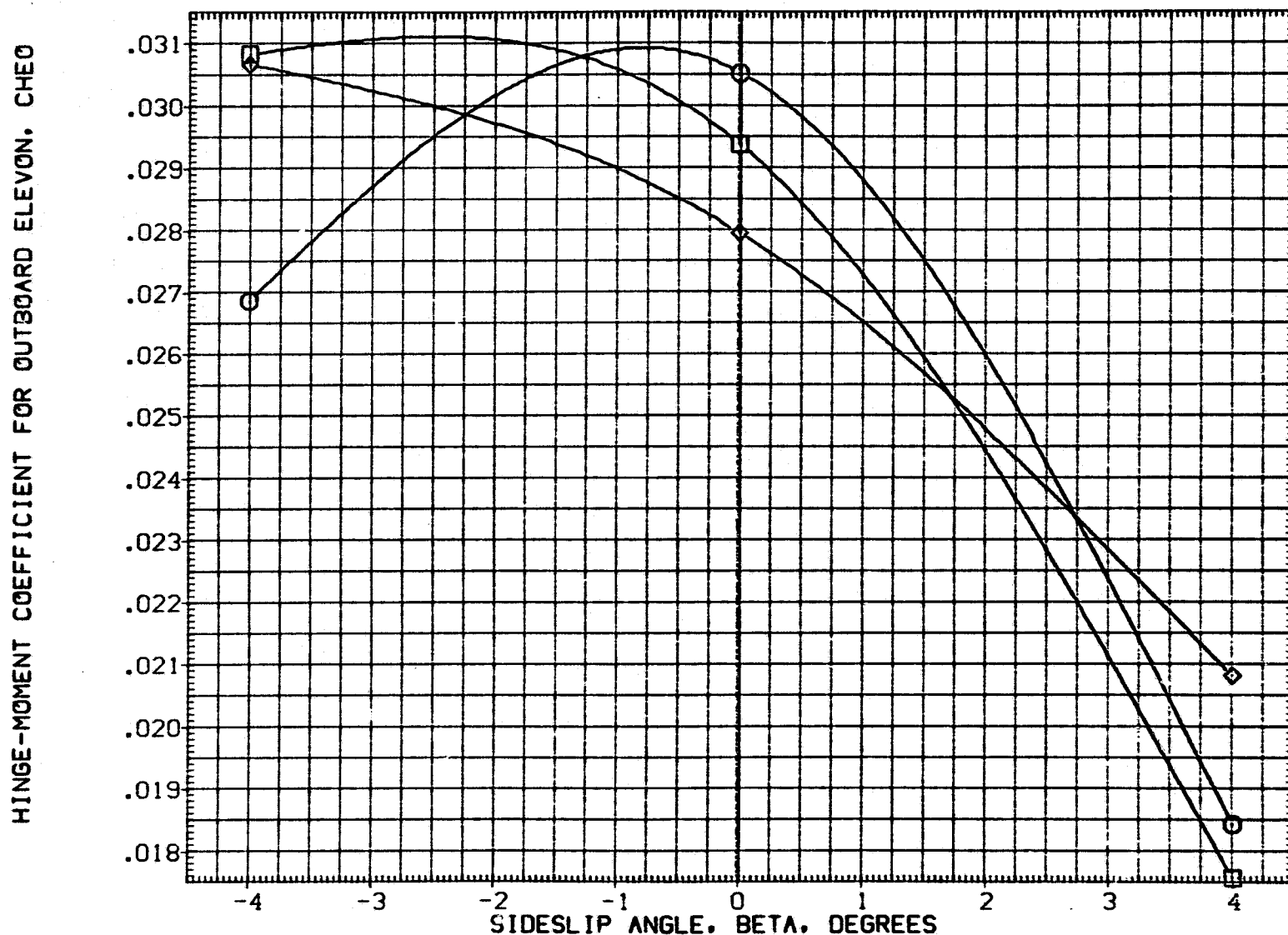


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29) ○	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	50. FT.
(RE4Y42) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y34) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

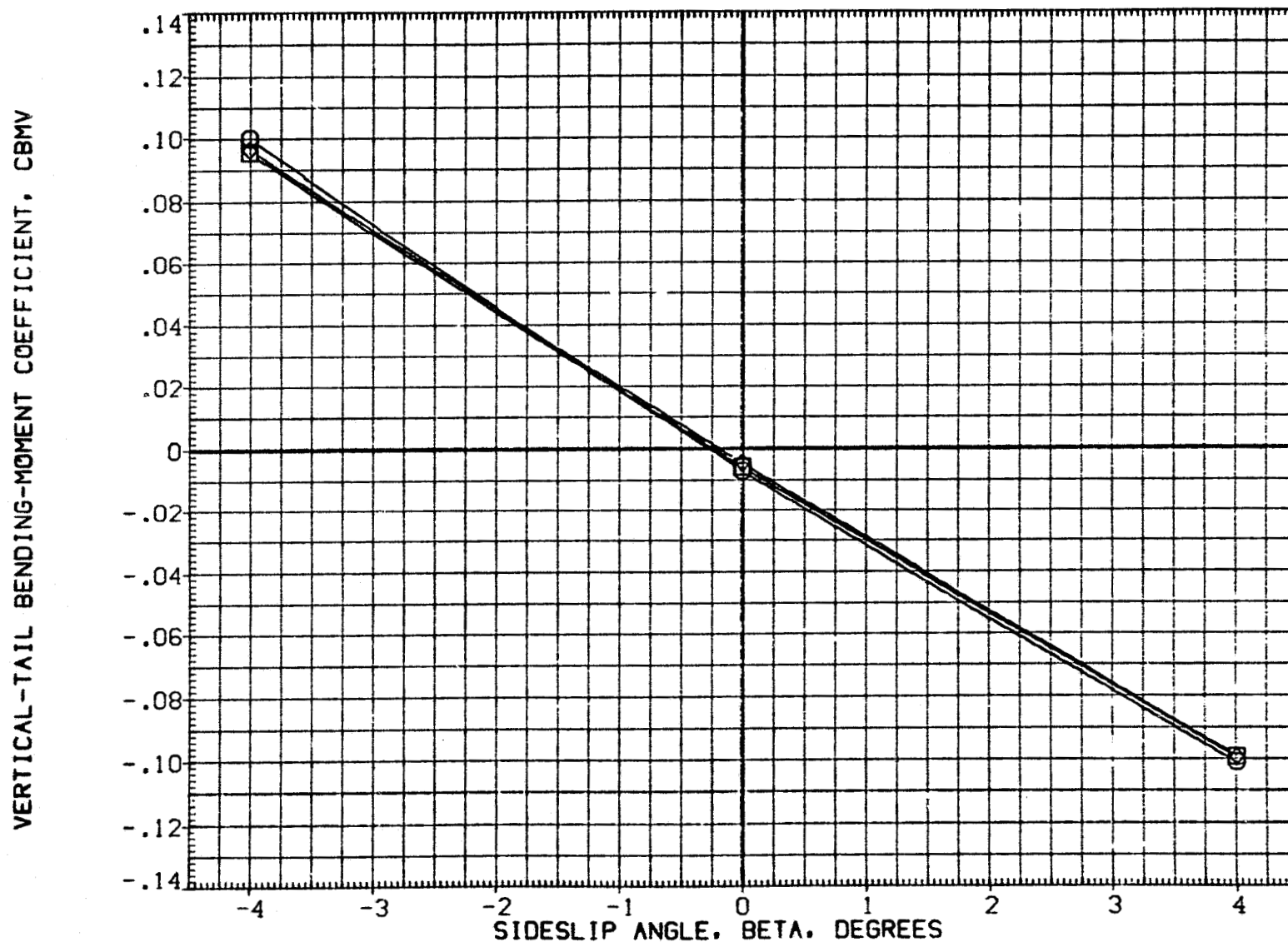


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SO.FT.
(RE4Y42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

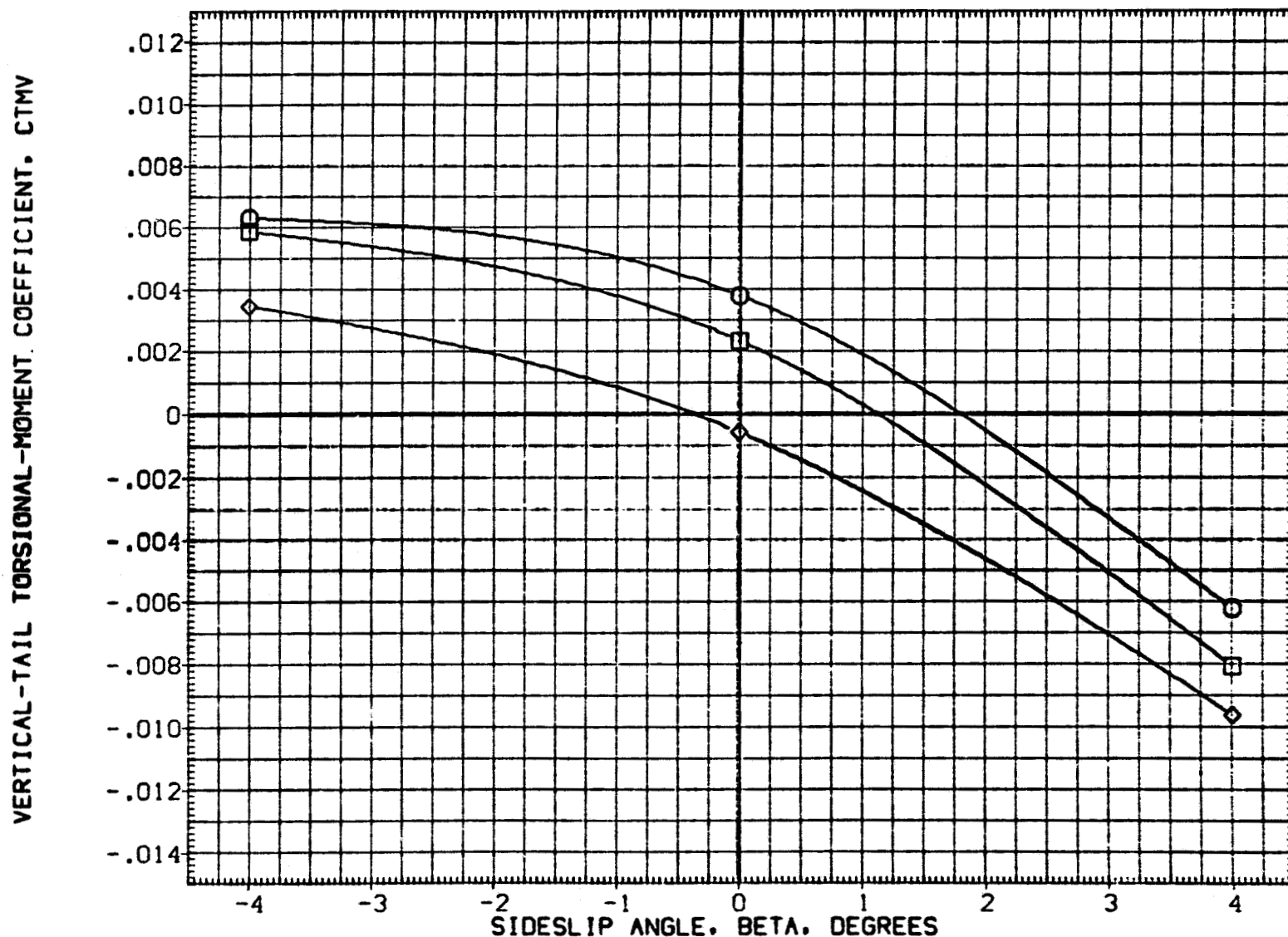





FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y29) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF 2690.0000 SQ.FT.
(RE4Y42) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF 1290.3000 IN.
(RE4Y34) 	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

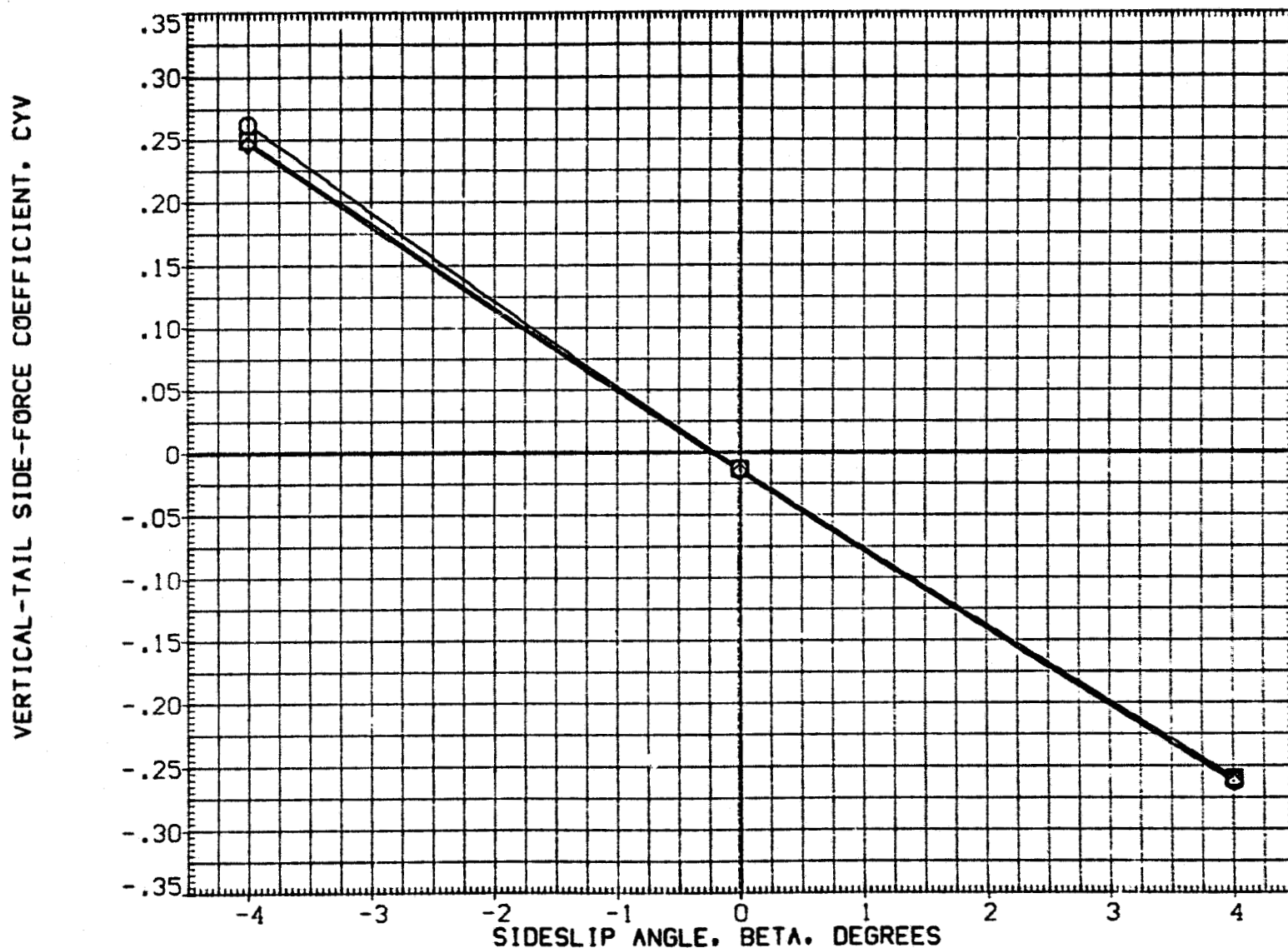


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y29)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	4.250	SREF	2690.0000	SO.FT.
(RE4Y42)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y34)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

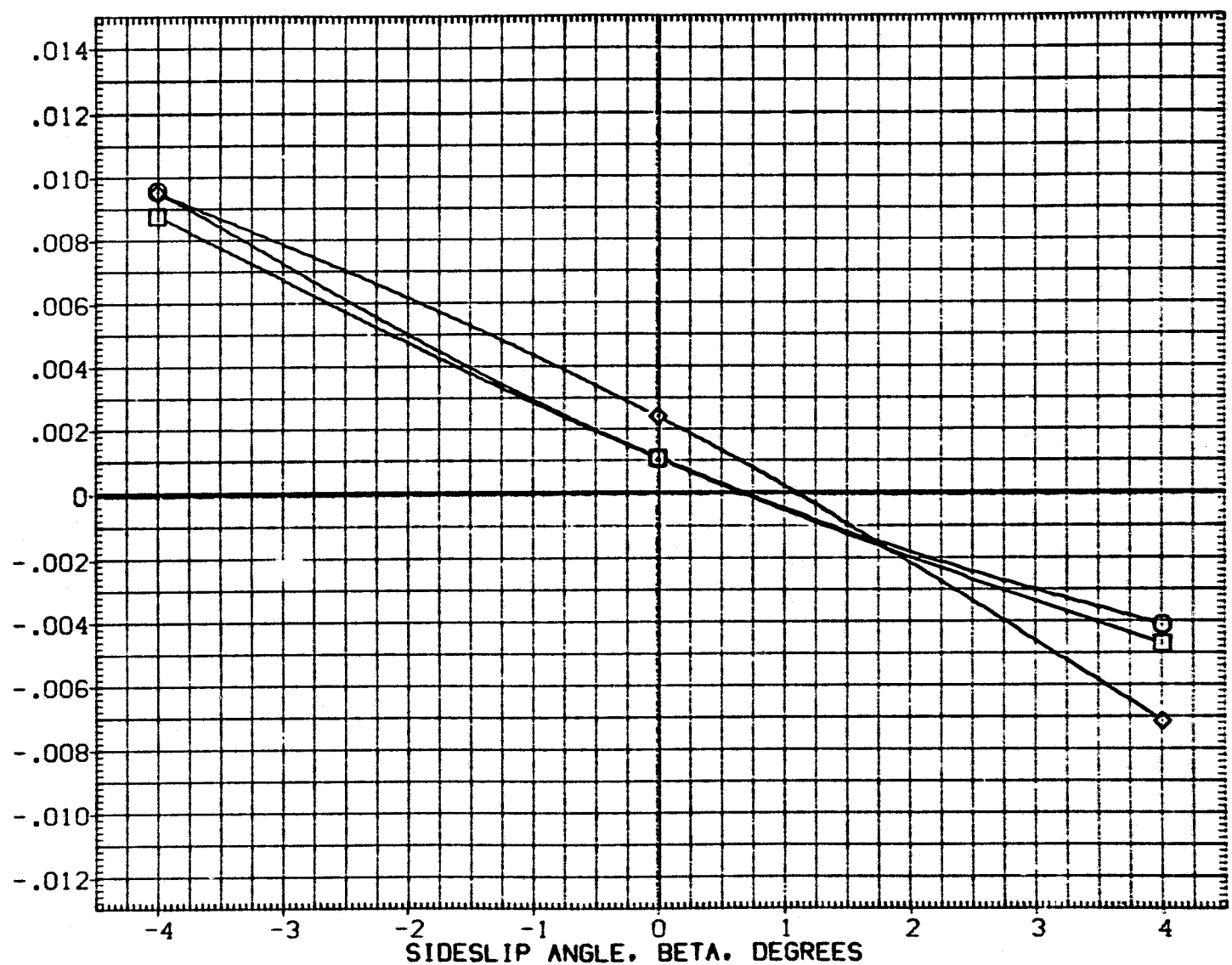


FIG. 100 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

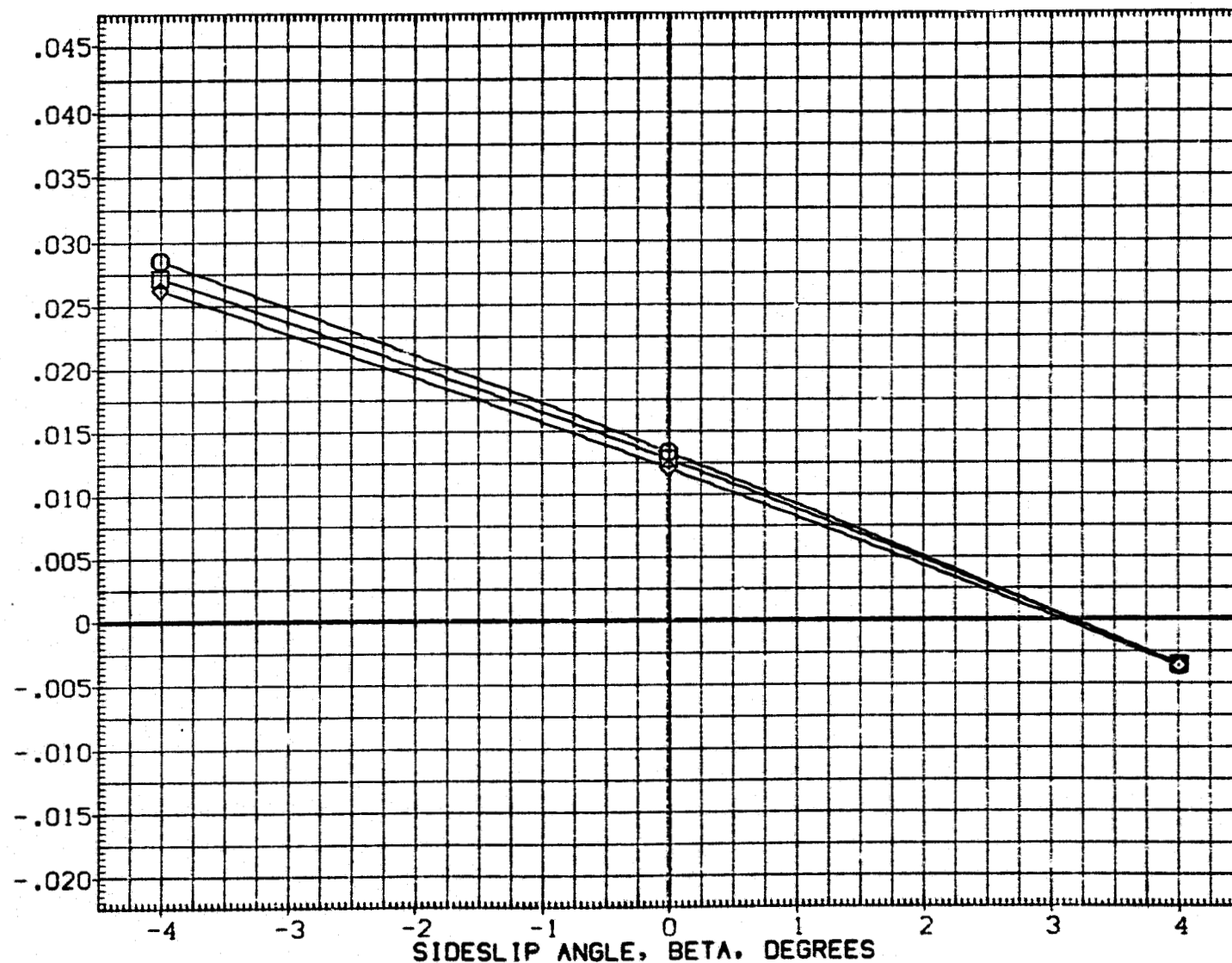


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

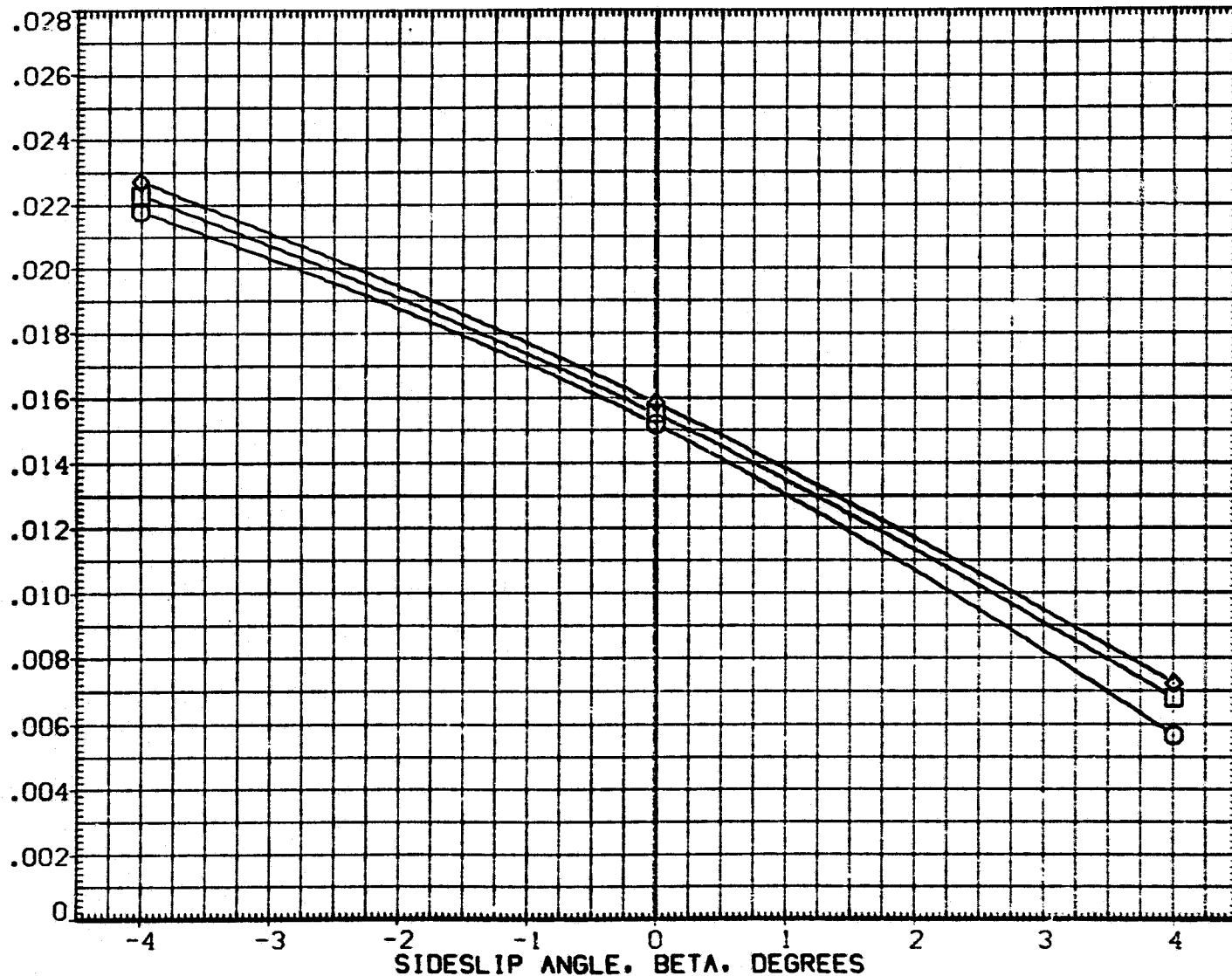


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

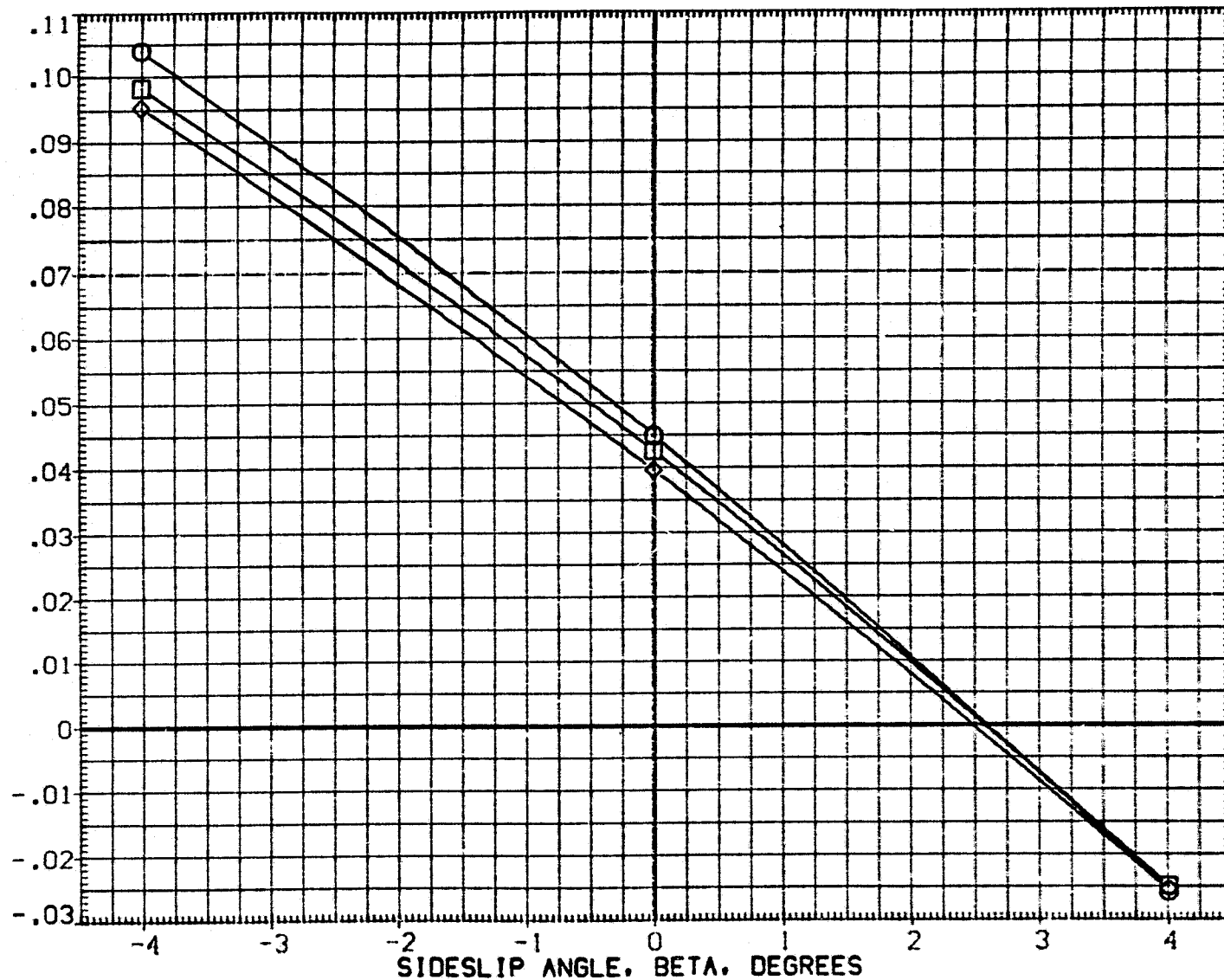


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

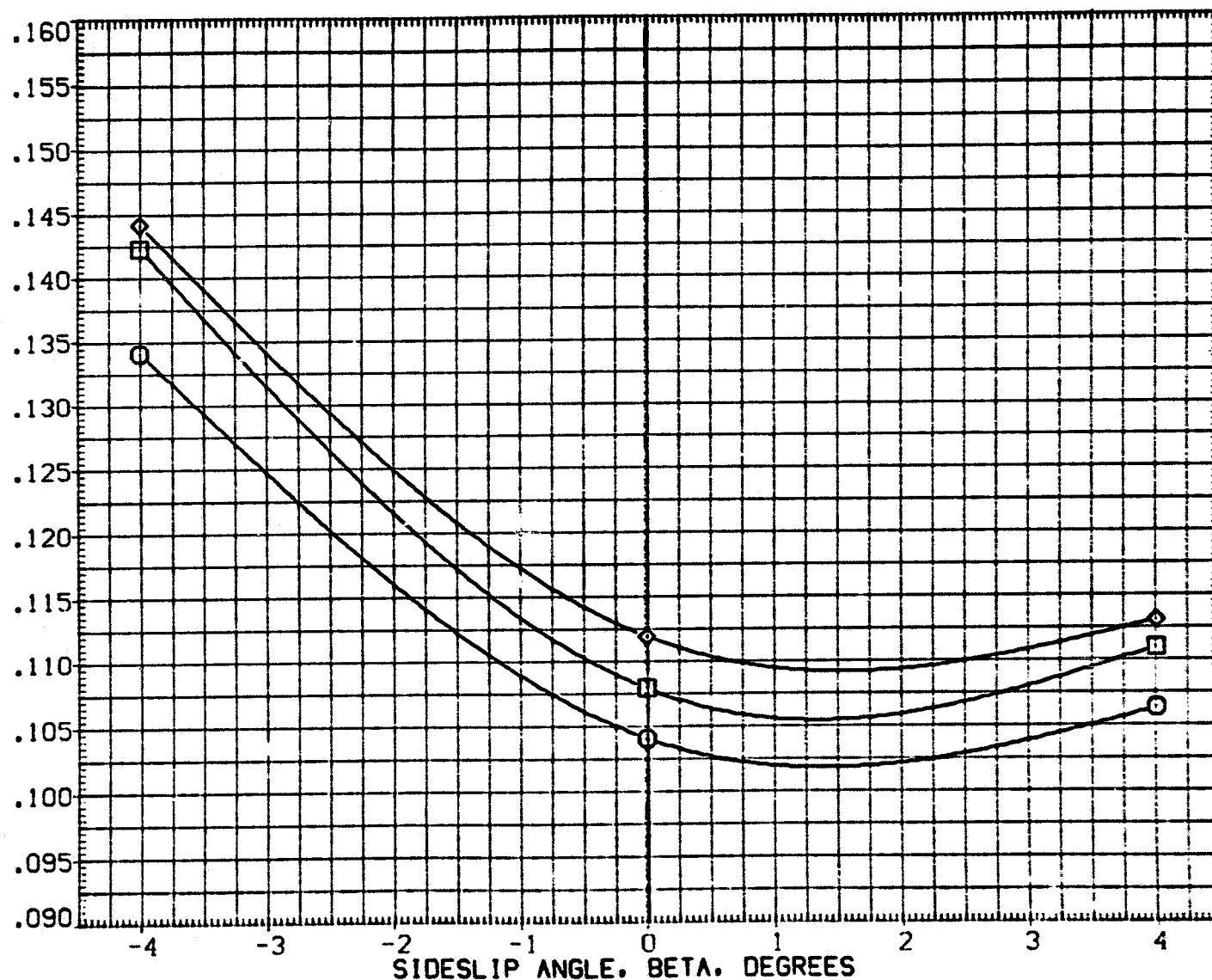


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A) ALPHA = .00

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	□	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y43)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y35)	◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
							XMRP	.0000 IN.
							YMRP	.0000 IN.
							ZMRP	.0000 IN.
							SCALE	.0200

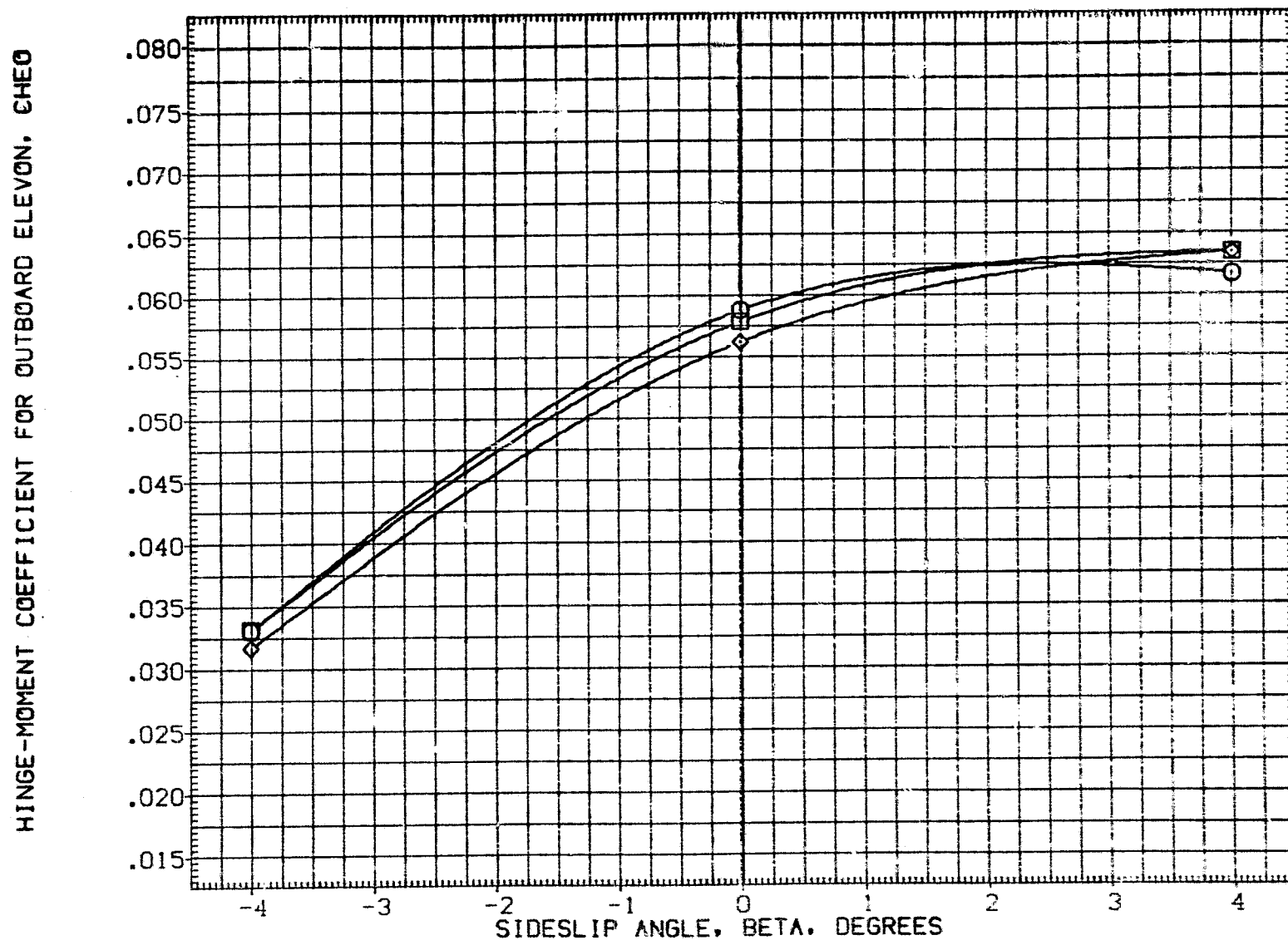


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1293.3000	IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

VERTICAL-TAIL BENDING-MOMENT COEFFICIENT, CBMV

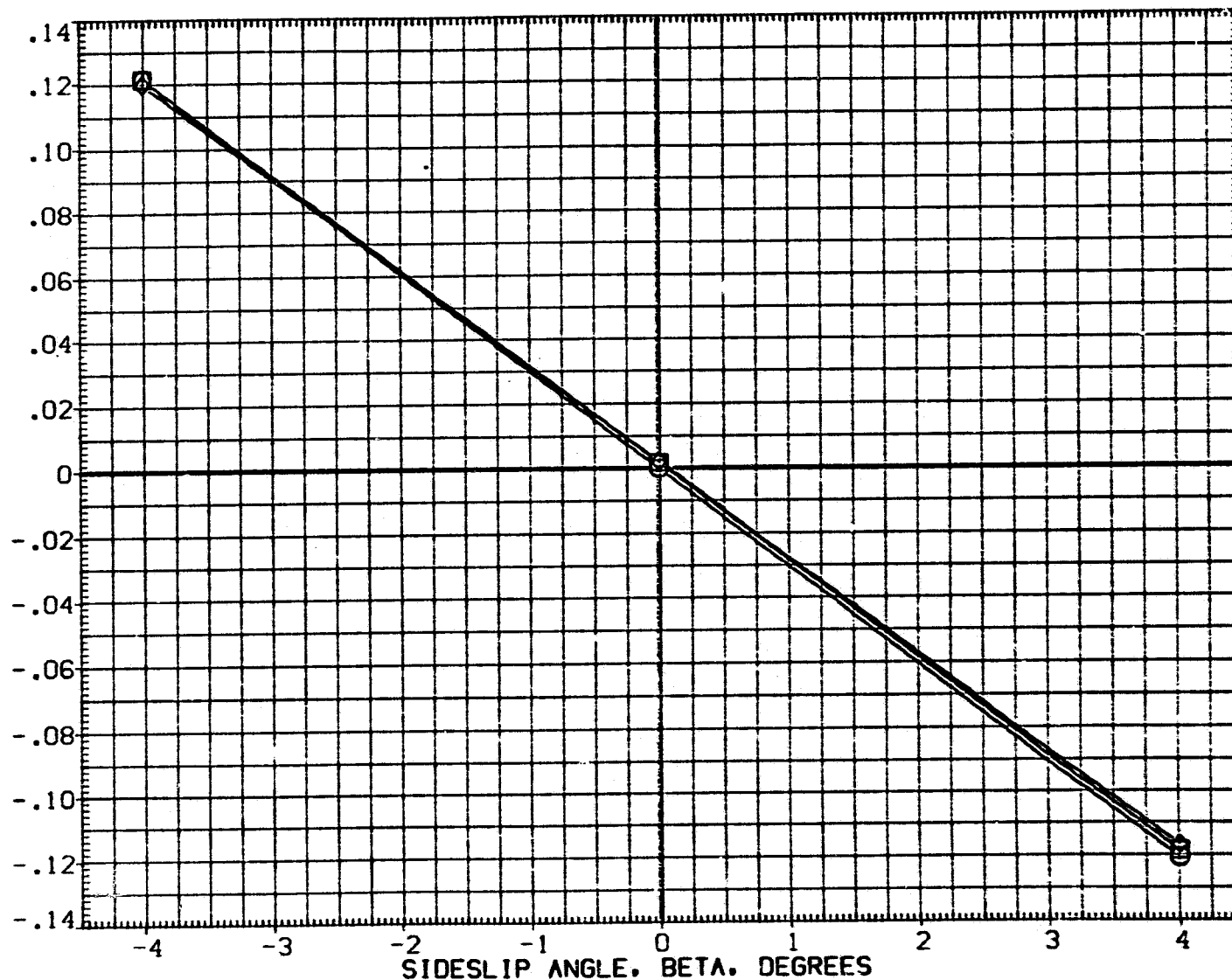


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

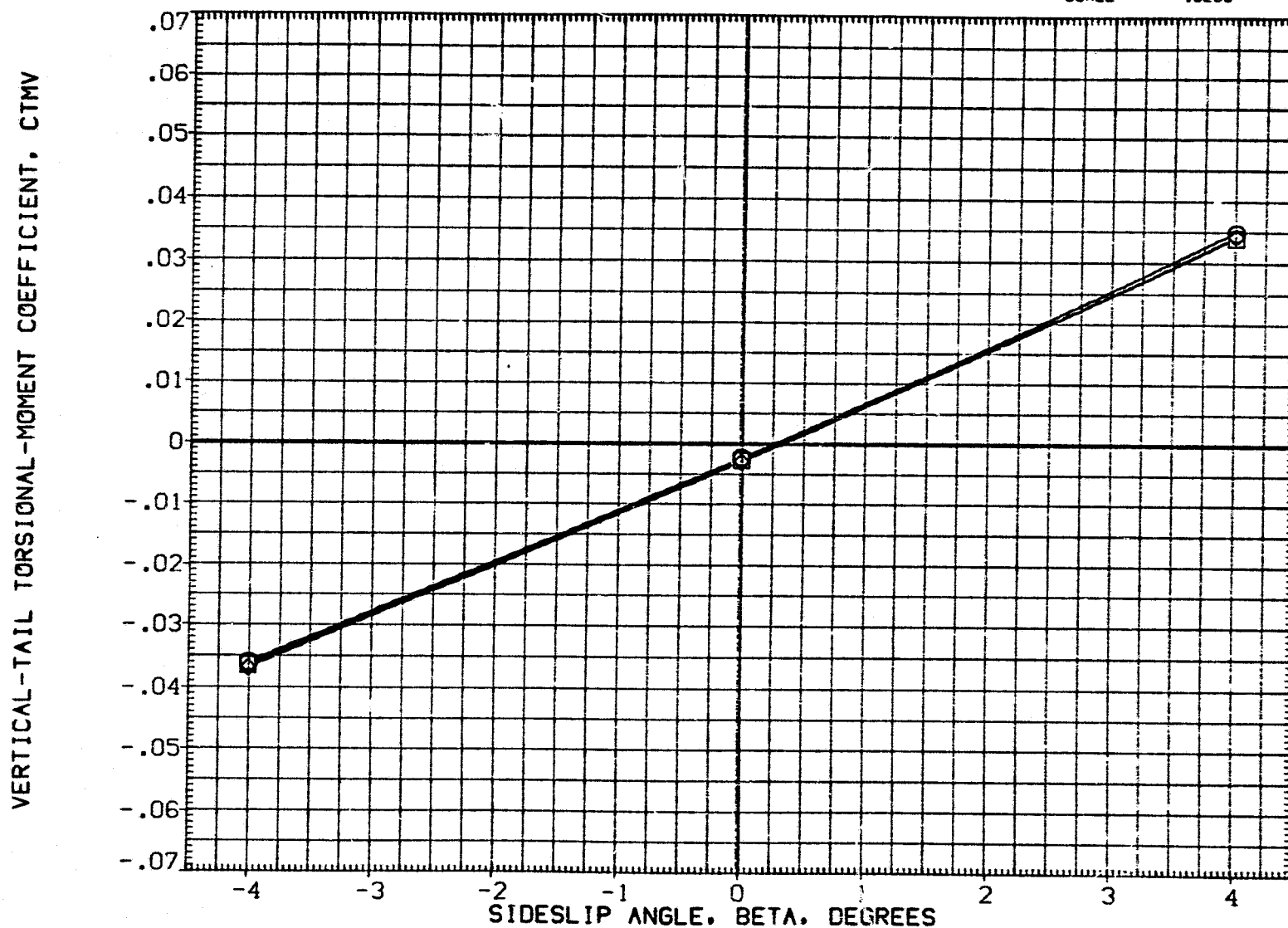


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

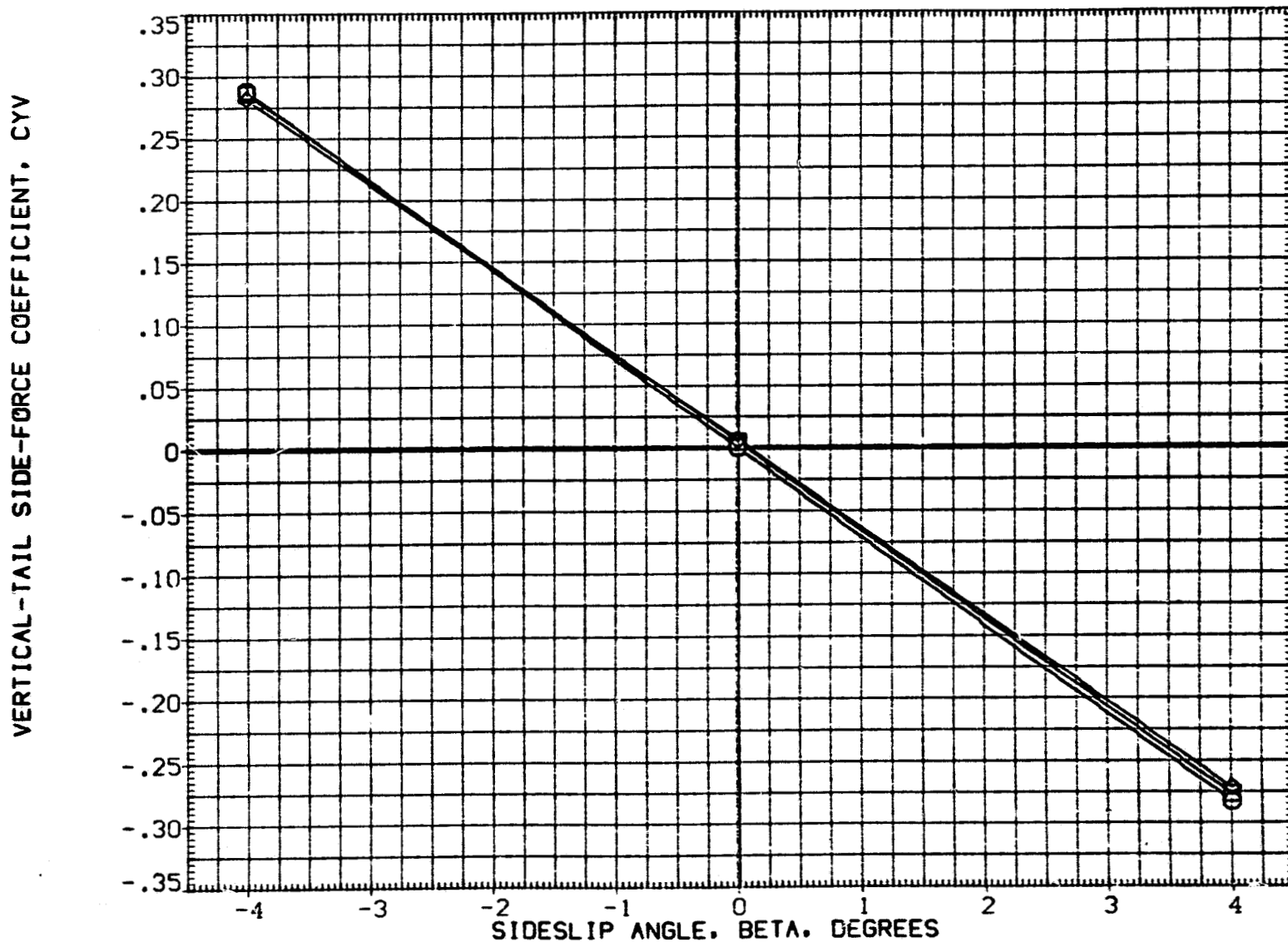


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y30)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y43)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y35)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

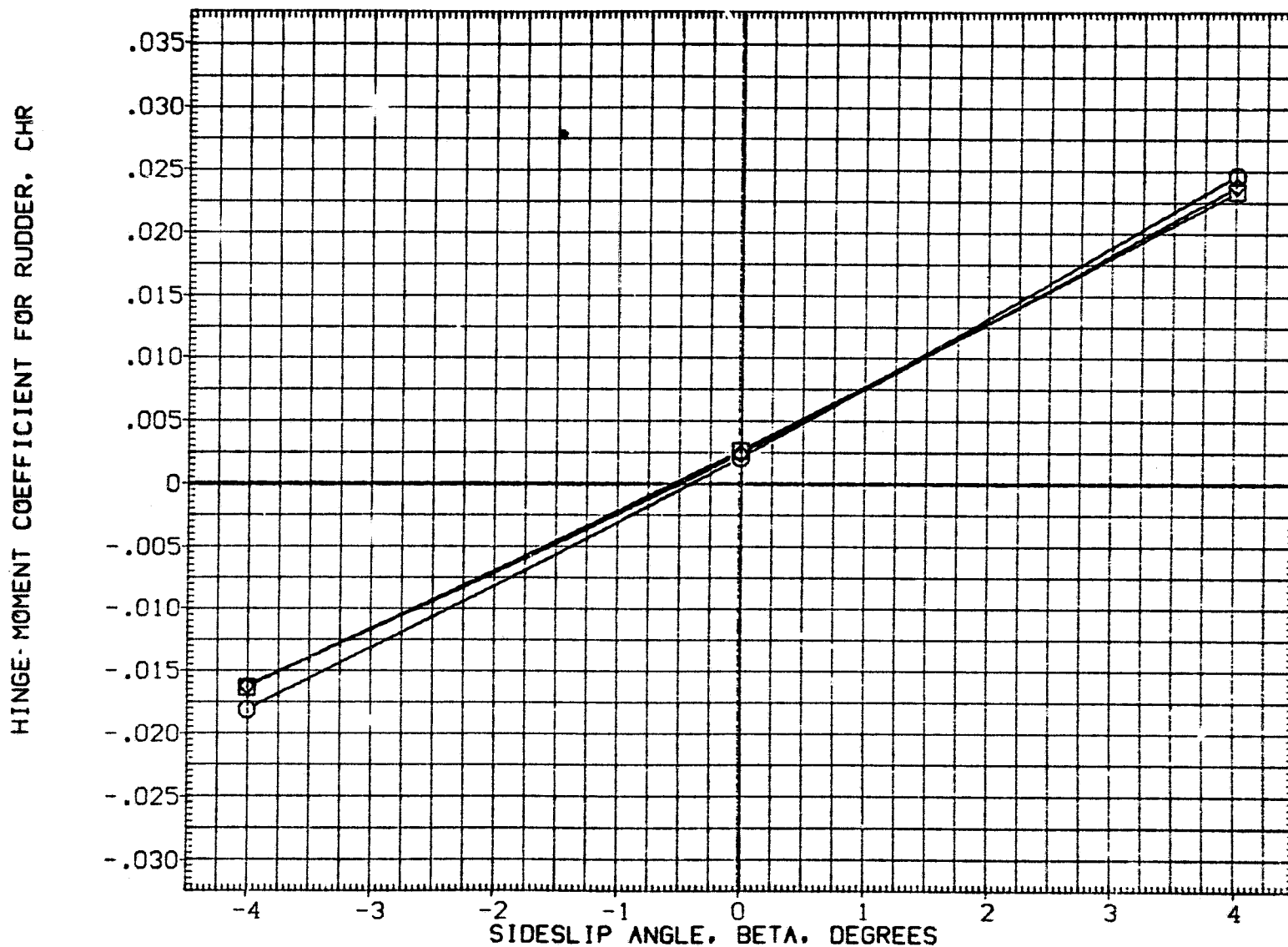


FIG. 101 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1ABC OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y44)	ARC 11-023 1AB0 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000	IN.
(RE4Y36)	ARC 11-023 1AB0 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

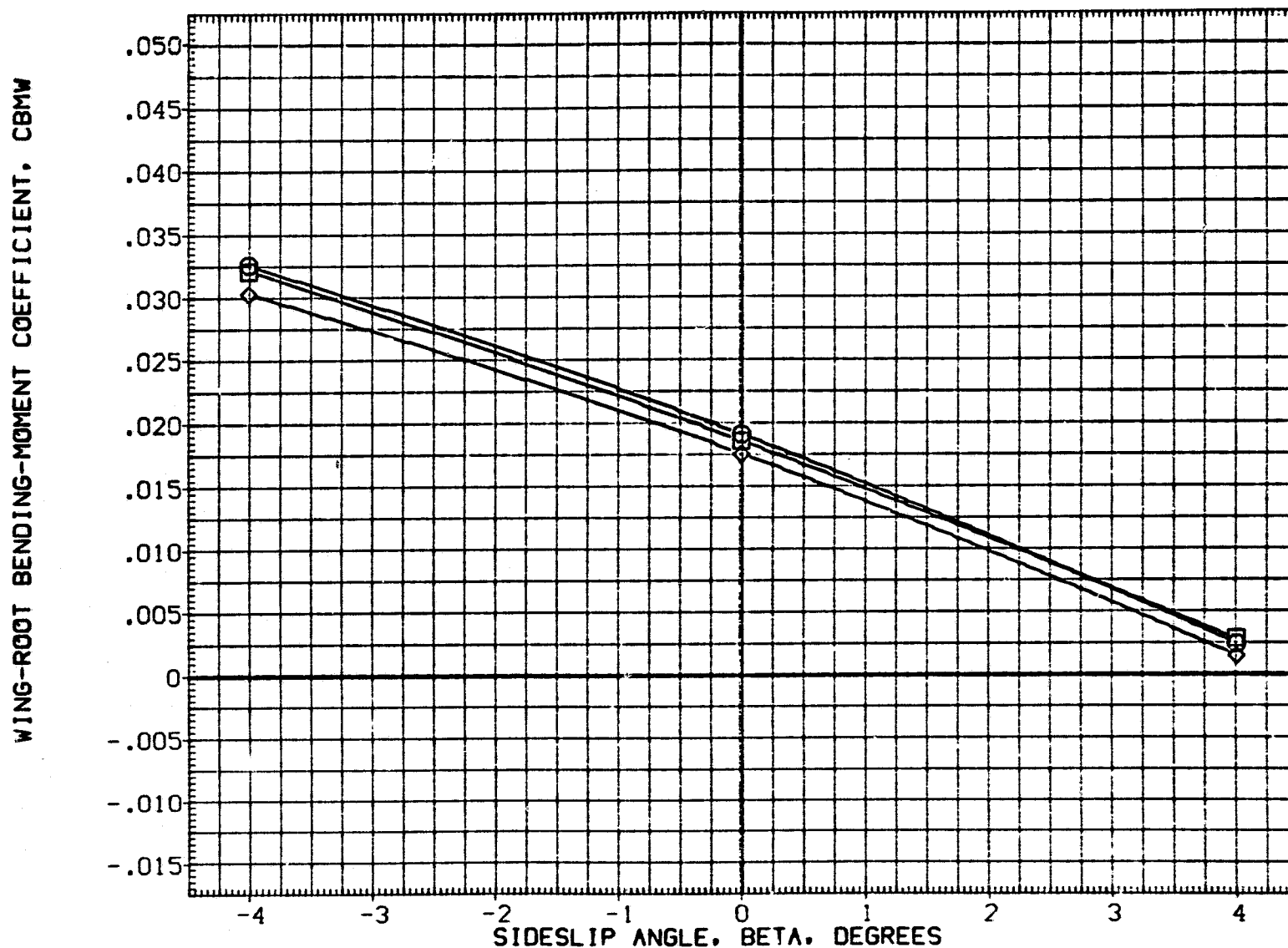


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000	IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTM_W

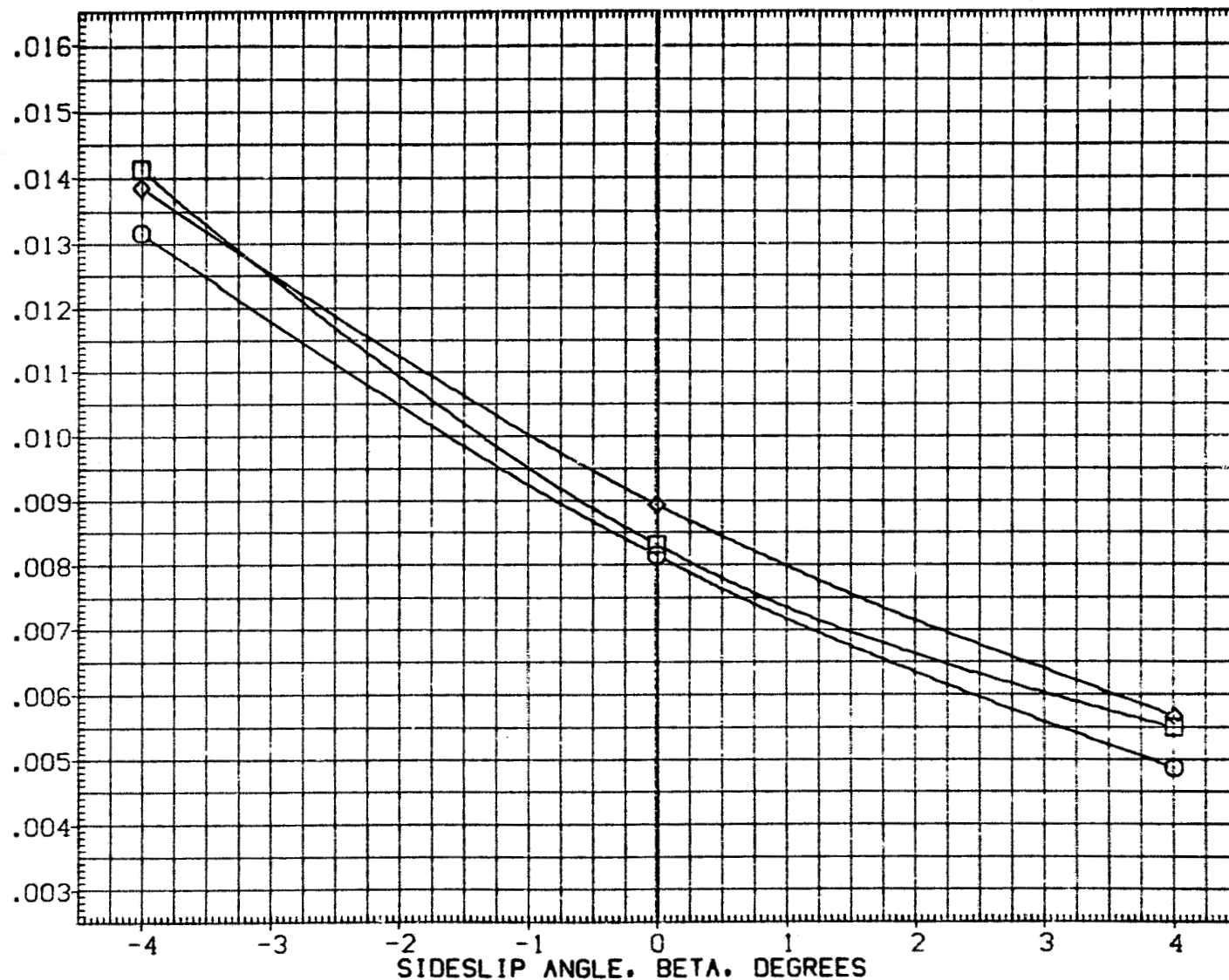


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000	IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

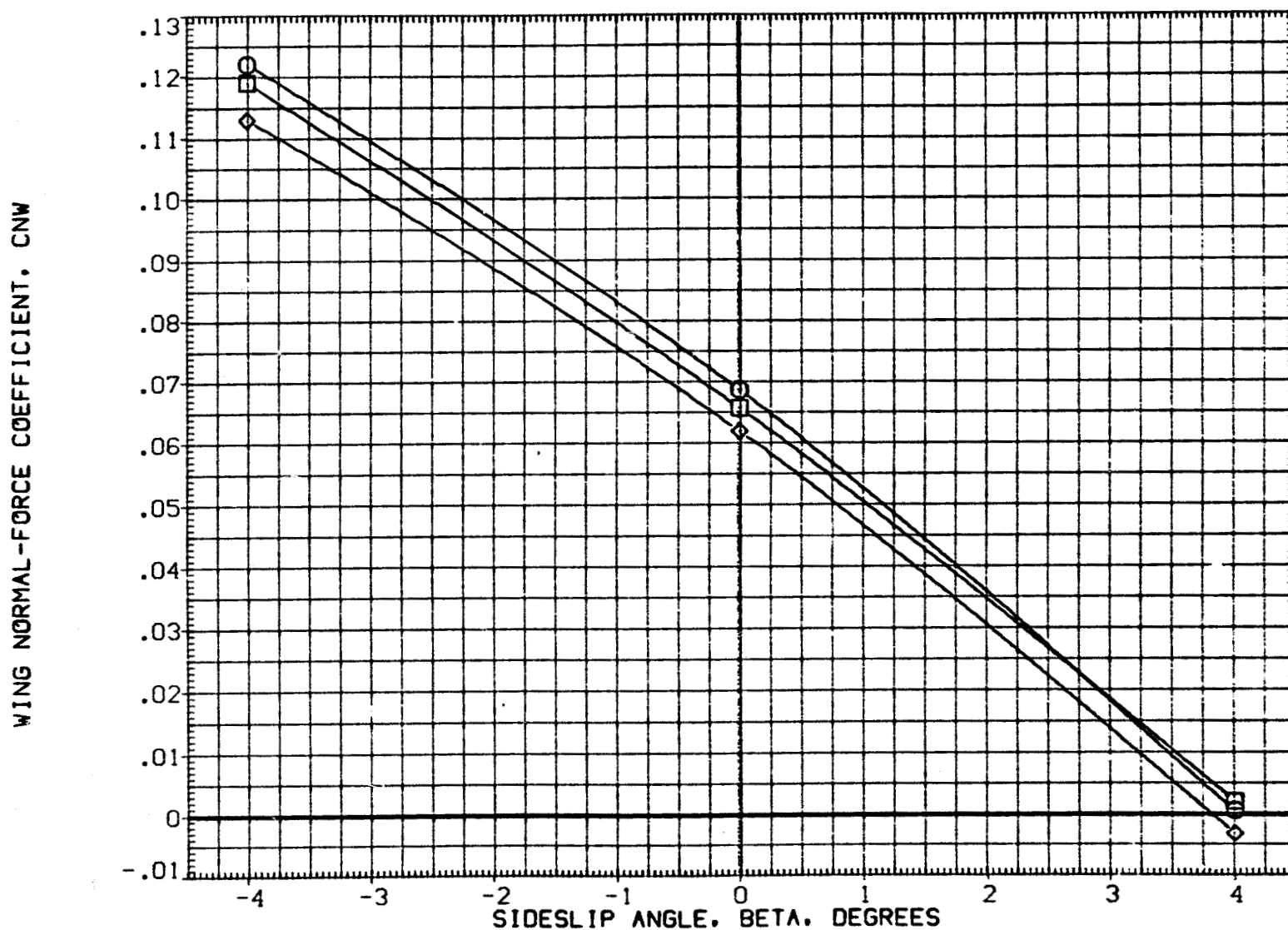


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	50.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000	IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

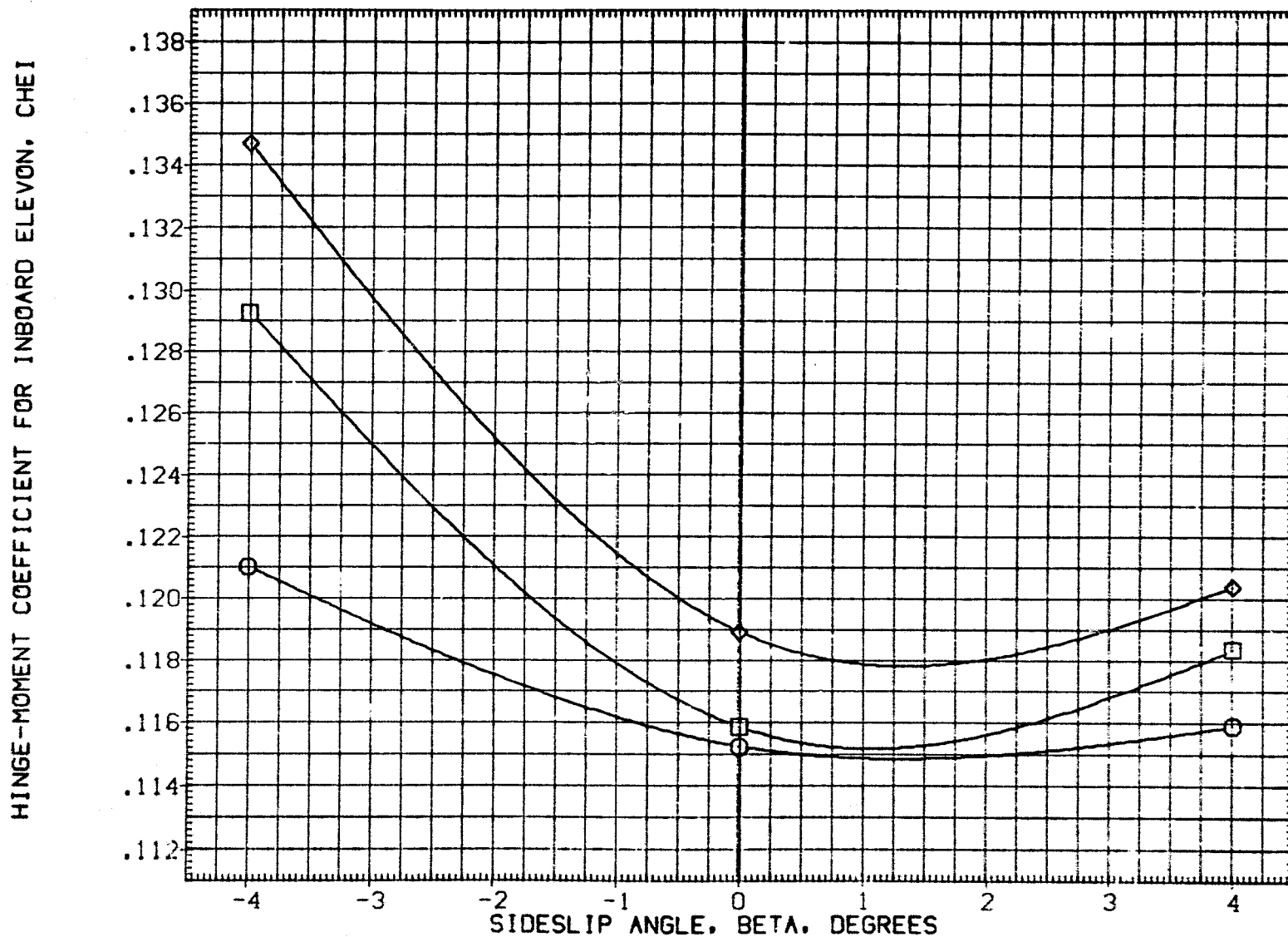


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000 IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

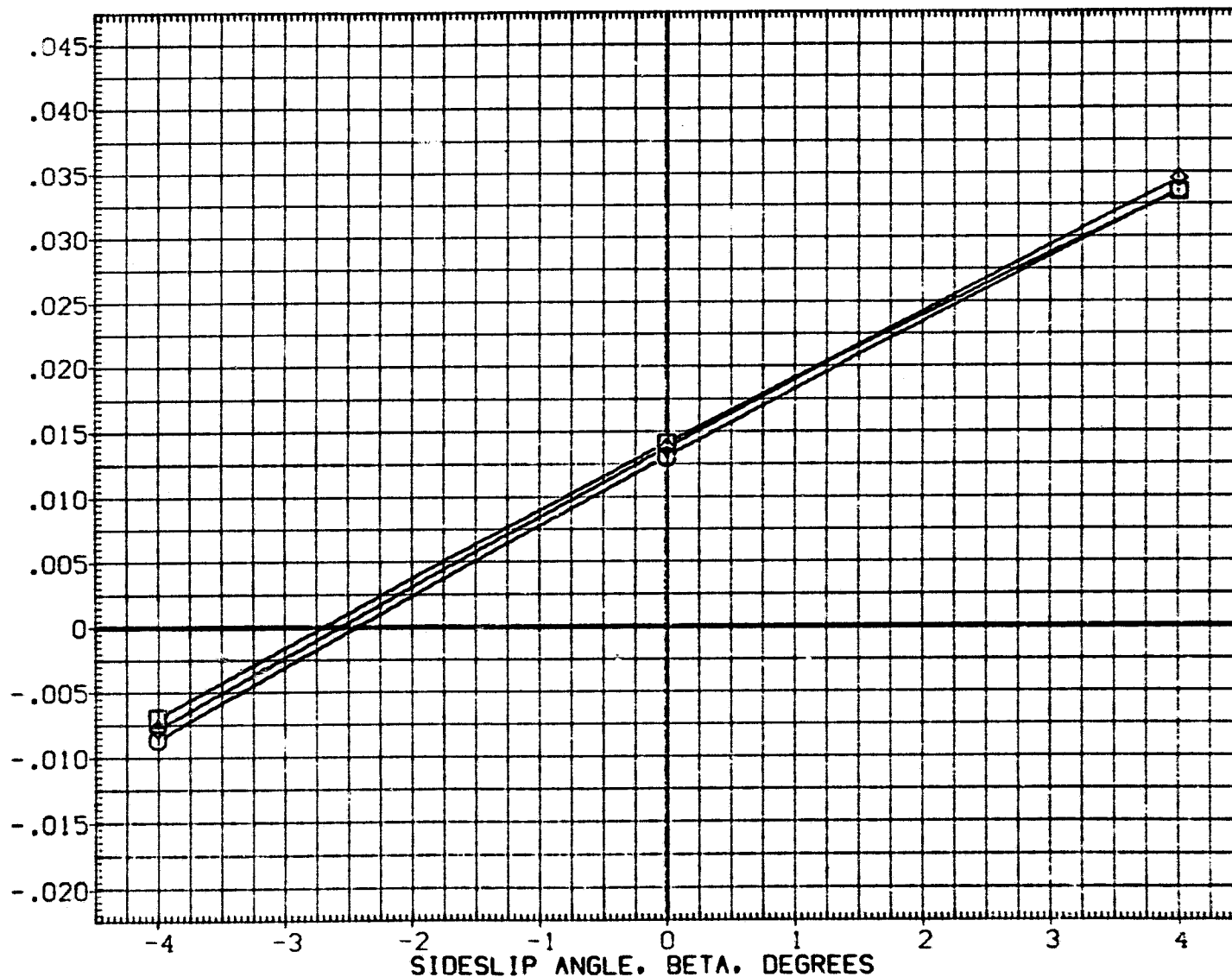


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000	SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000	IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

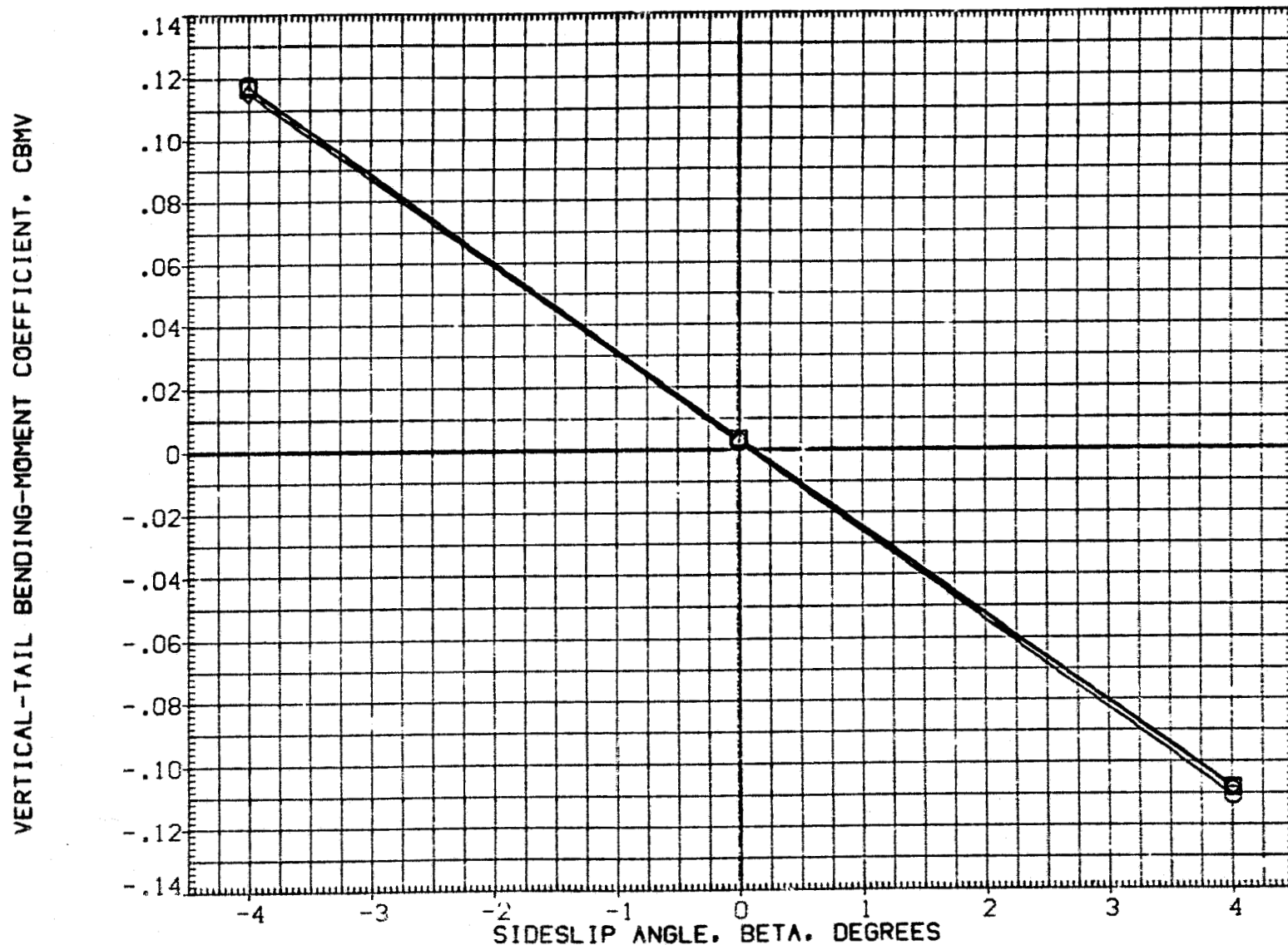


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000 IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

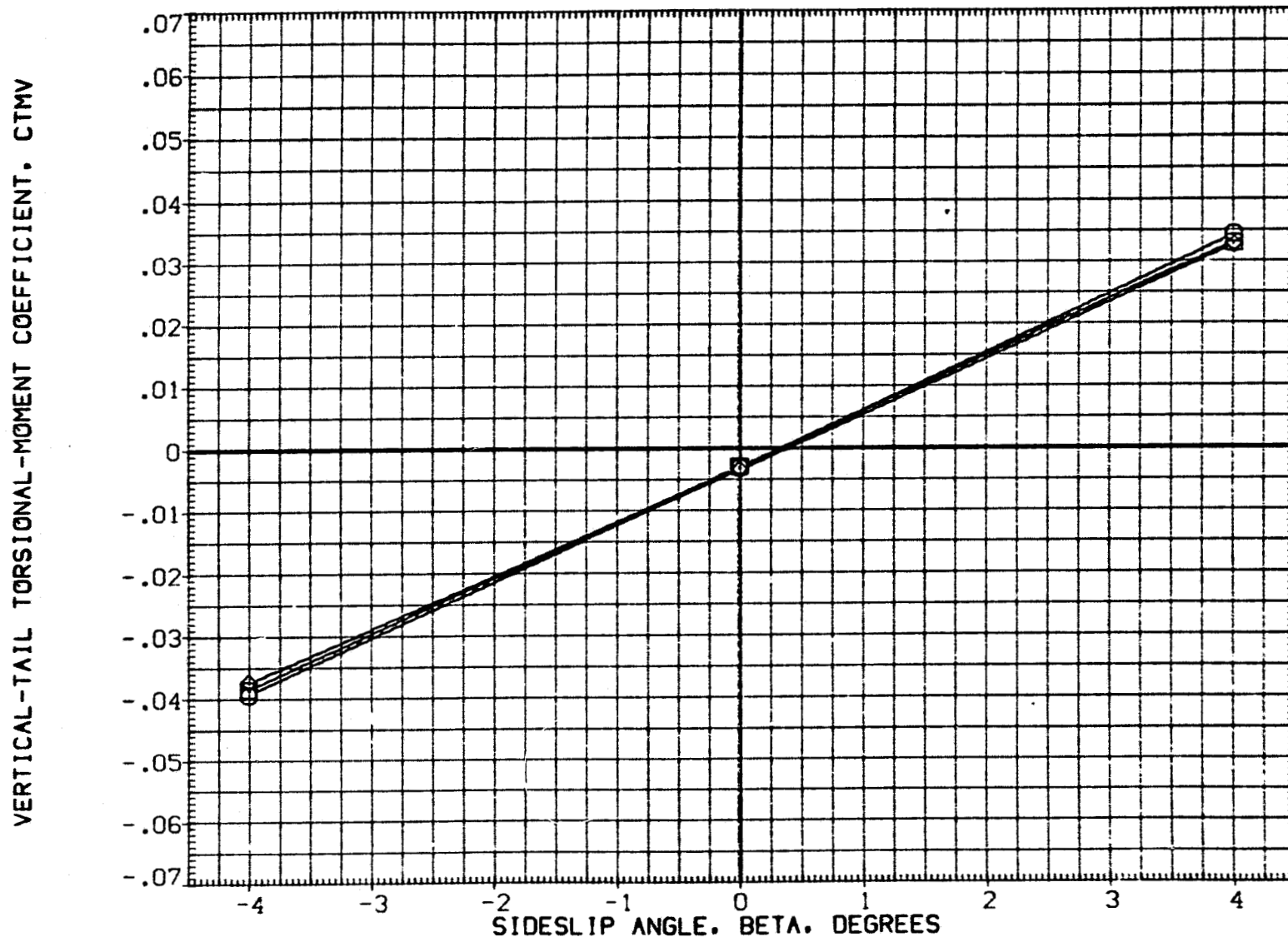


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000 IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

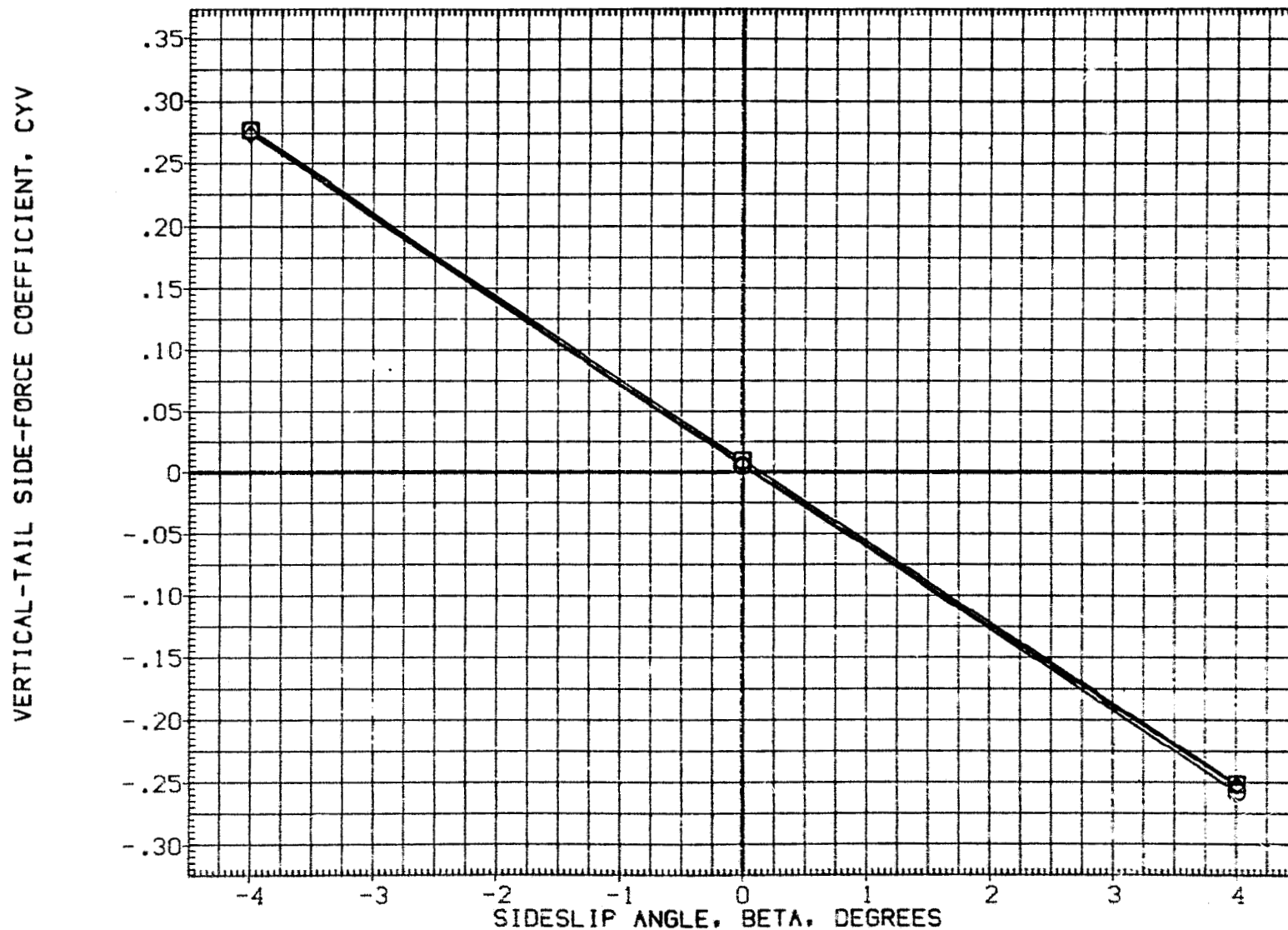


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y31)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	4.250	SREF	2690.0000 SQ.FT.
(RE4Y44)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	3.250	LREF	1290.3000 IN.
(RE4Y36)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.250	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

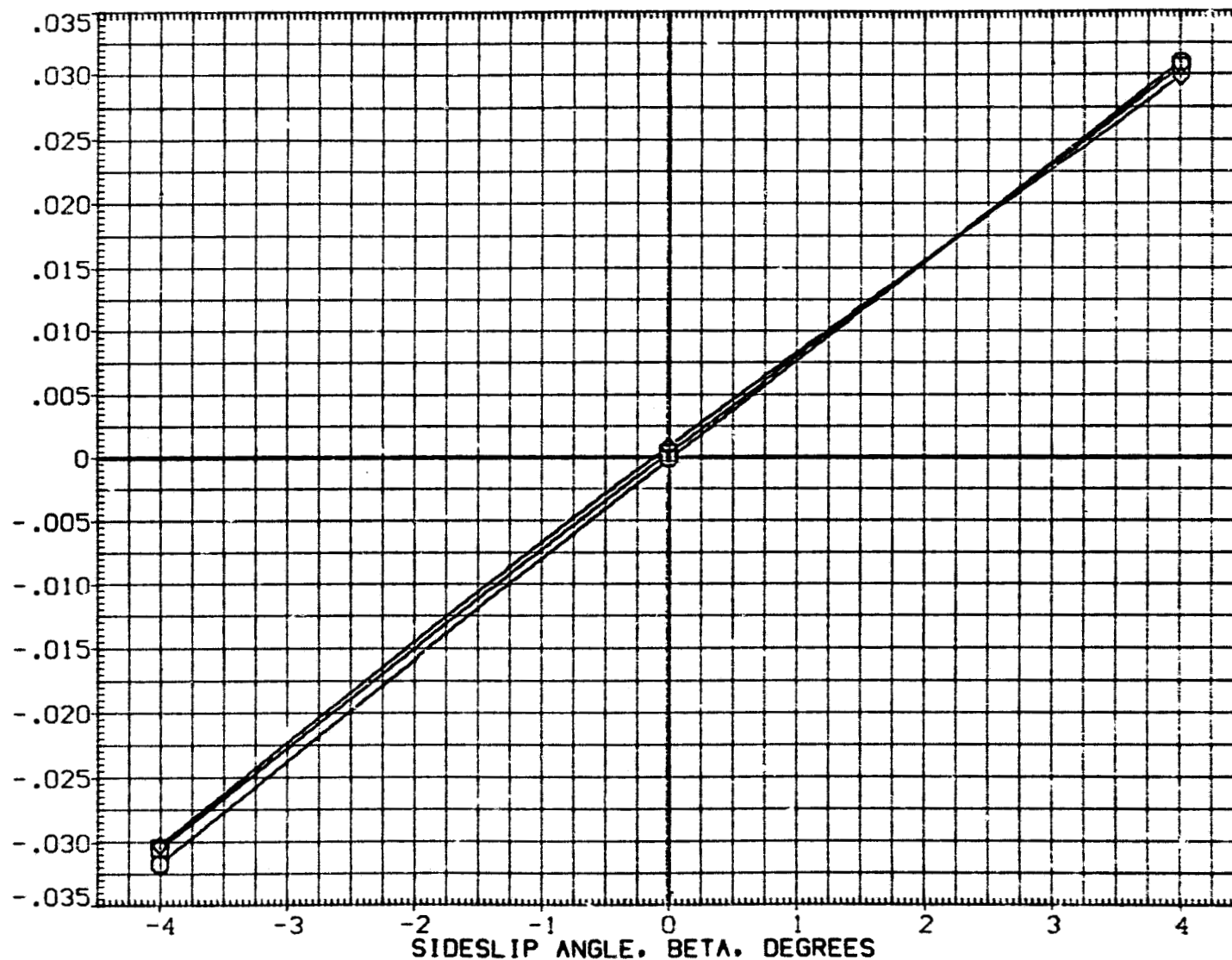


FIG. 102 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.25 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ. FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (LSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

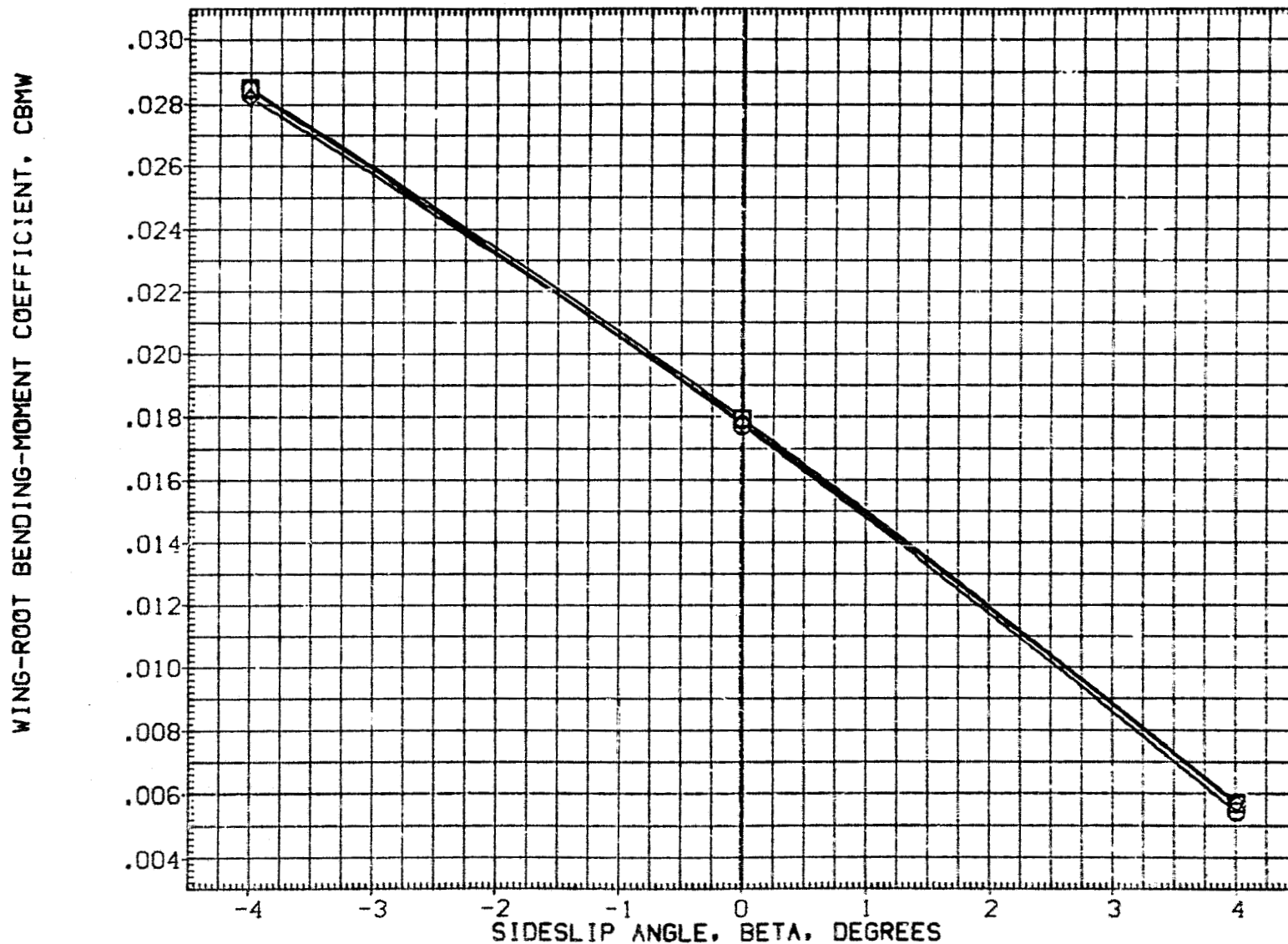


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1AB0 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 50.FT.
(RE4Y45)	ARC 11-023 1AB0 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4Y37)	ARC 11-023 1AB0 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

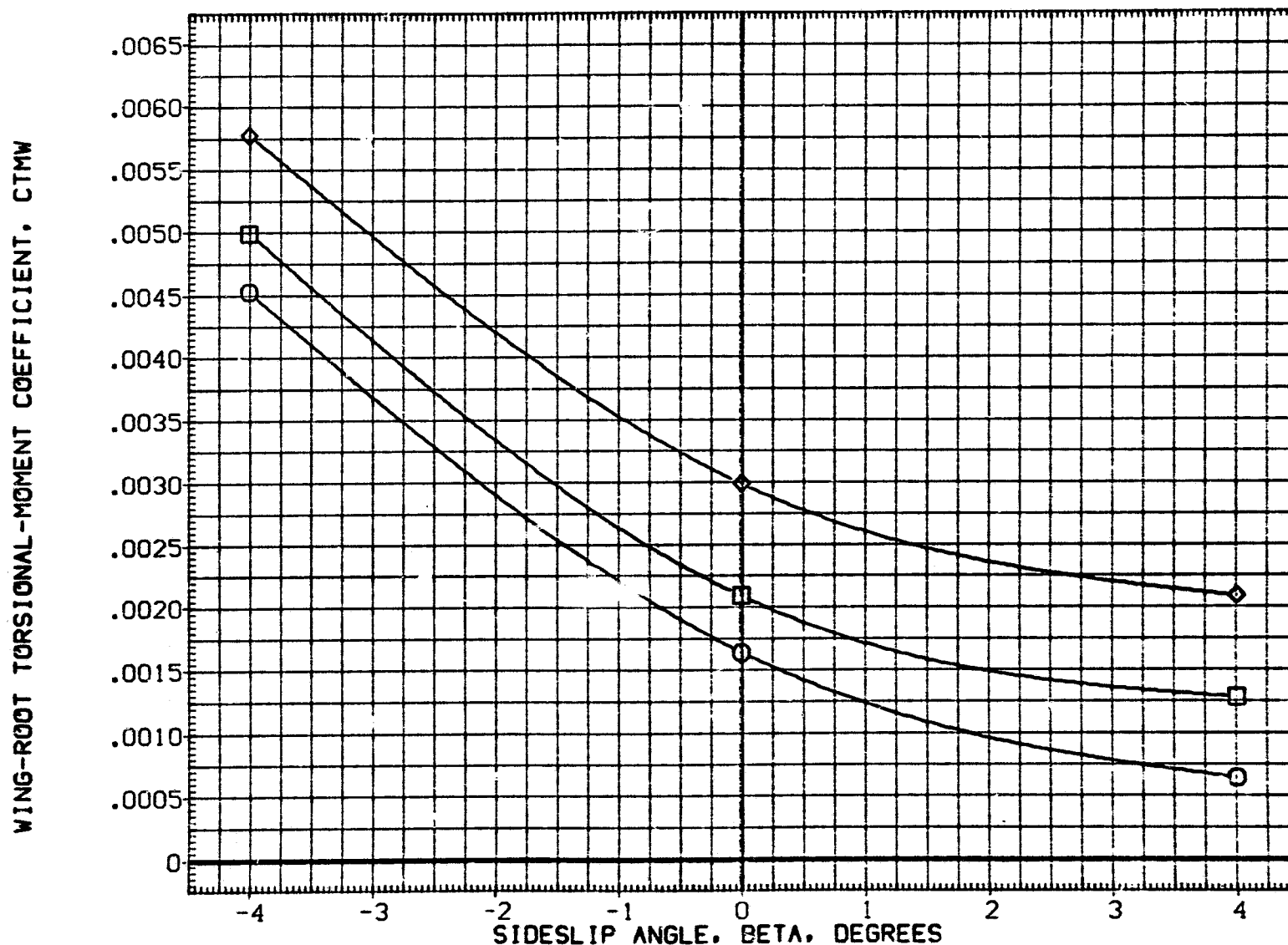


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SO.FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

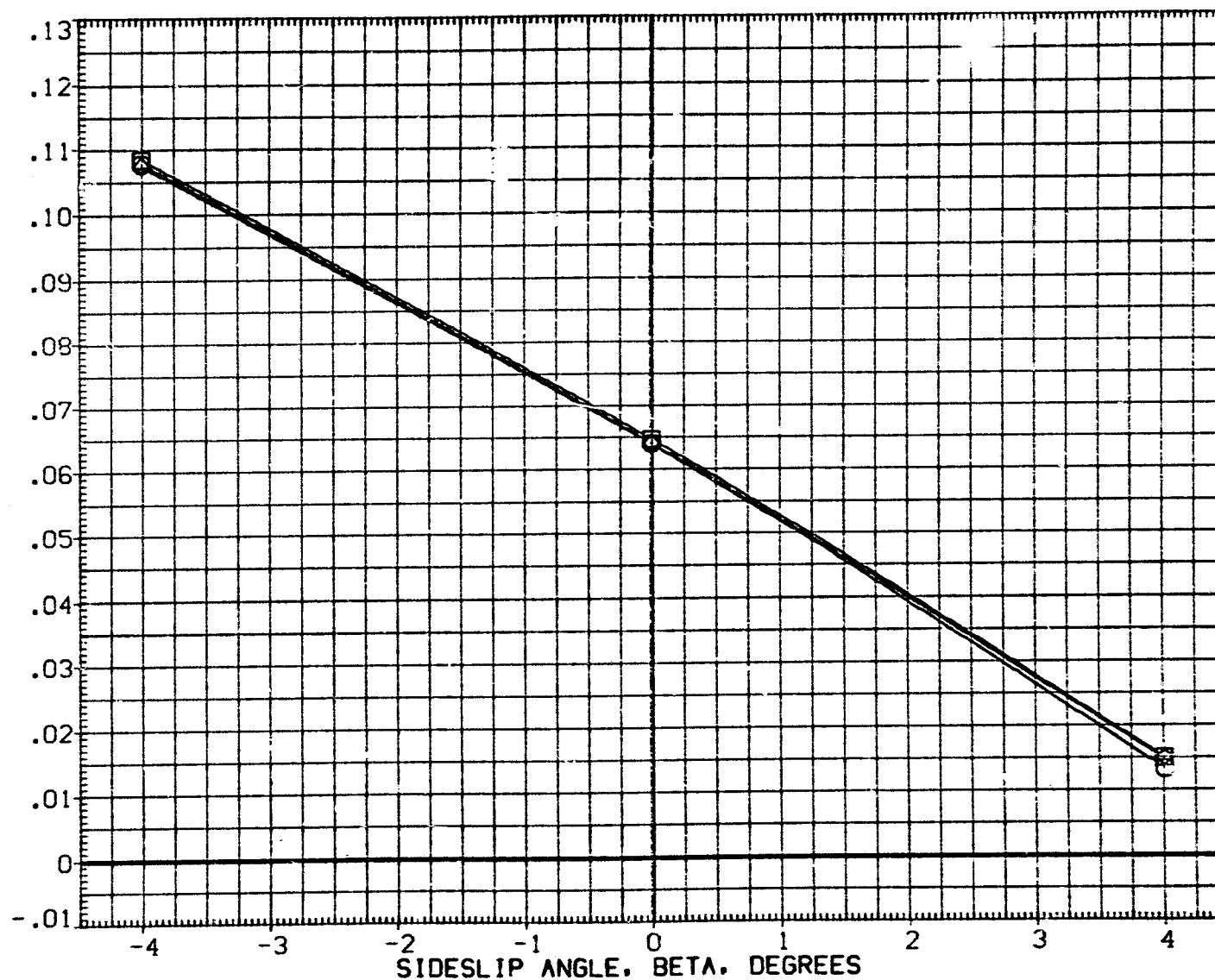


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

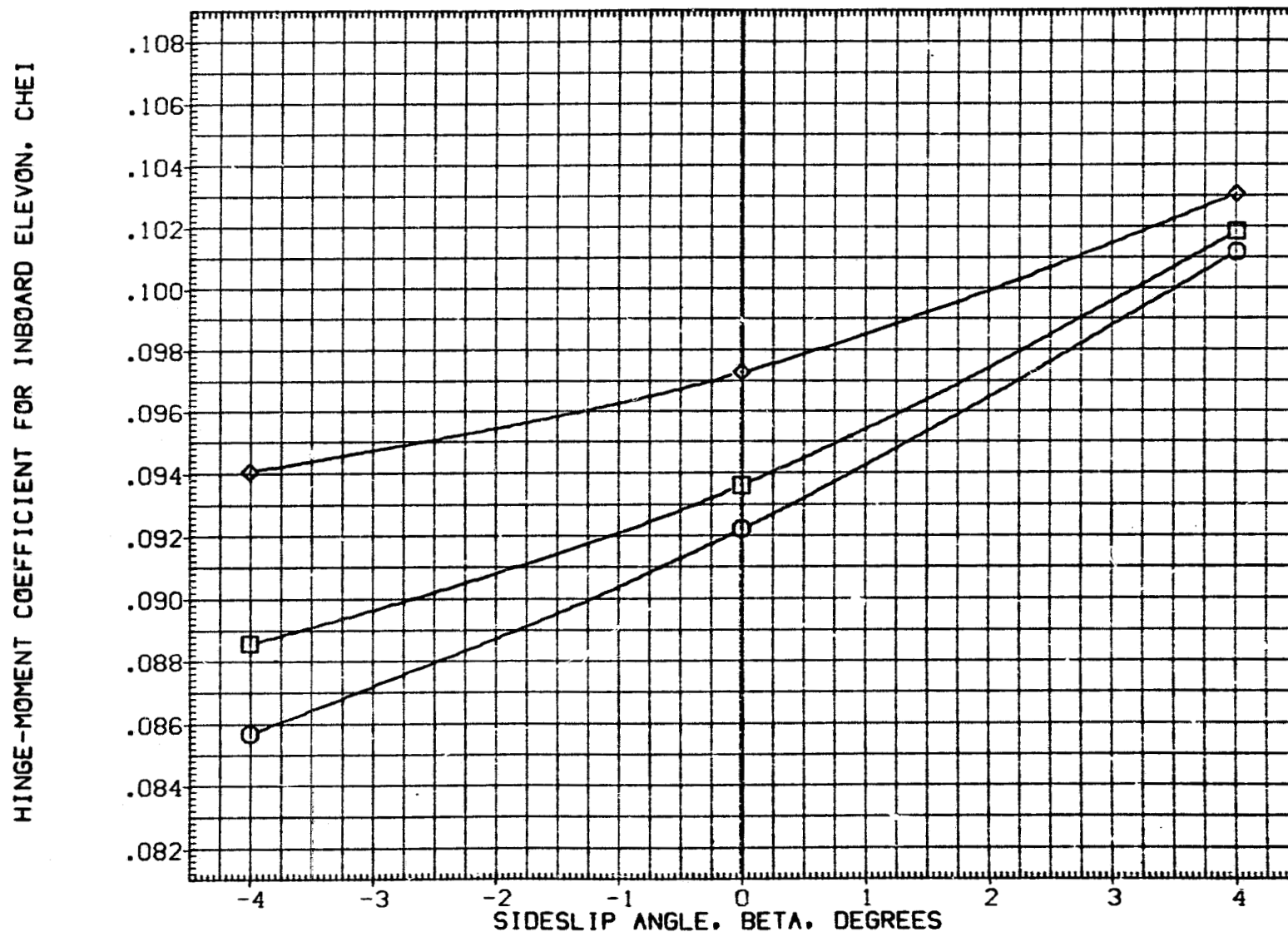


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y45) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4Y37) ◇	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

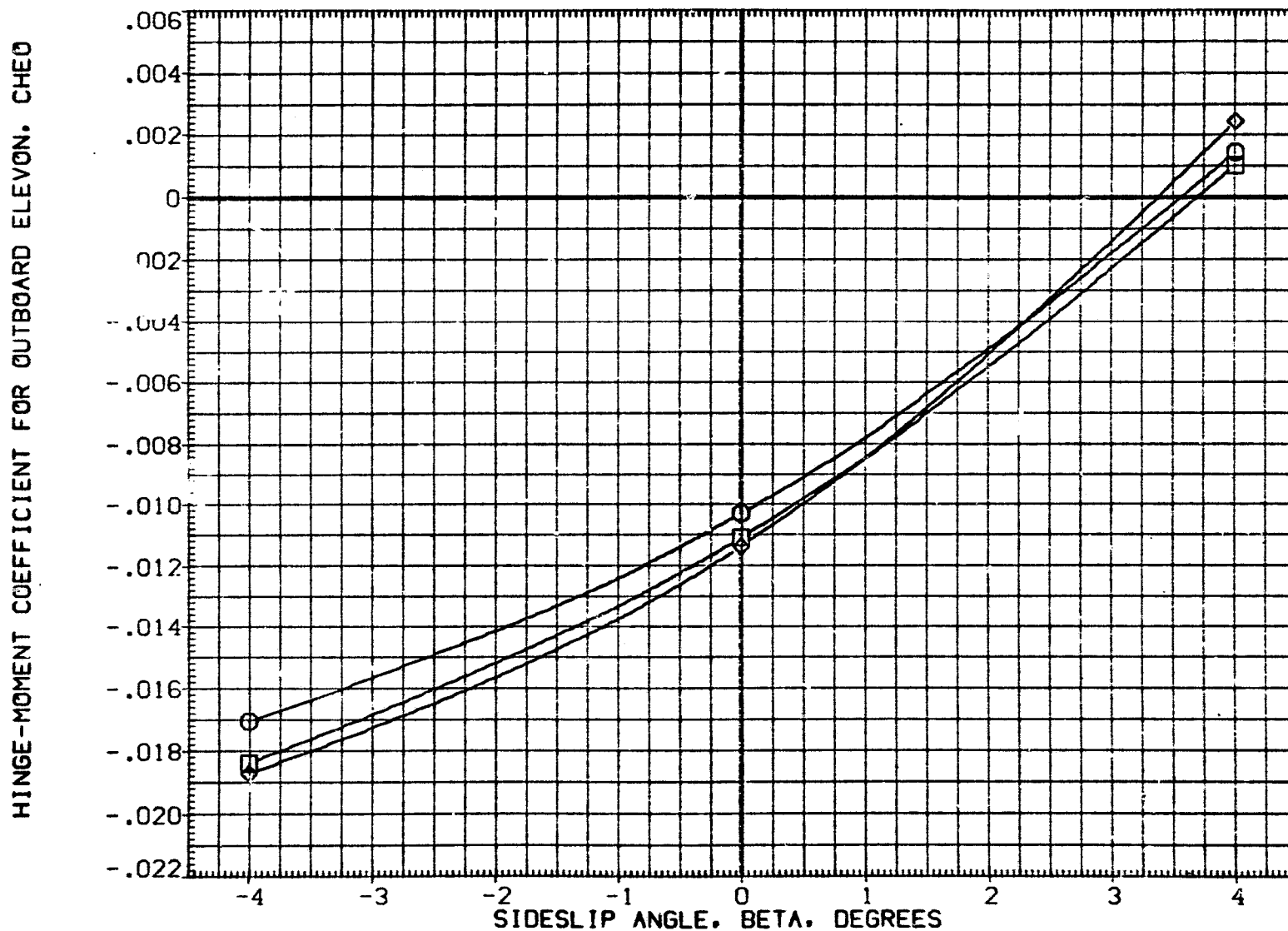


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SO.FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

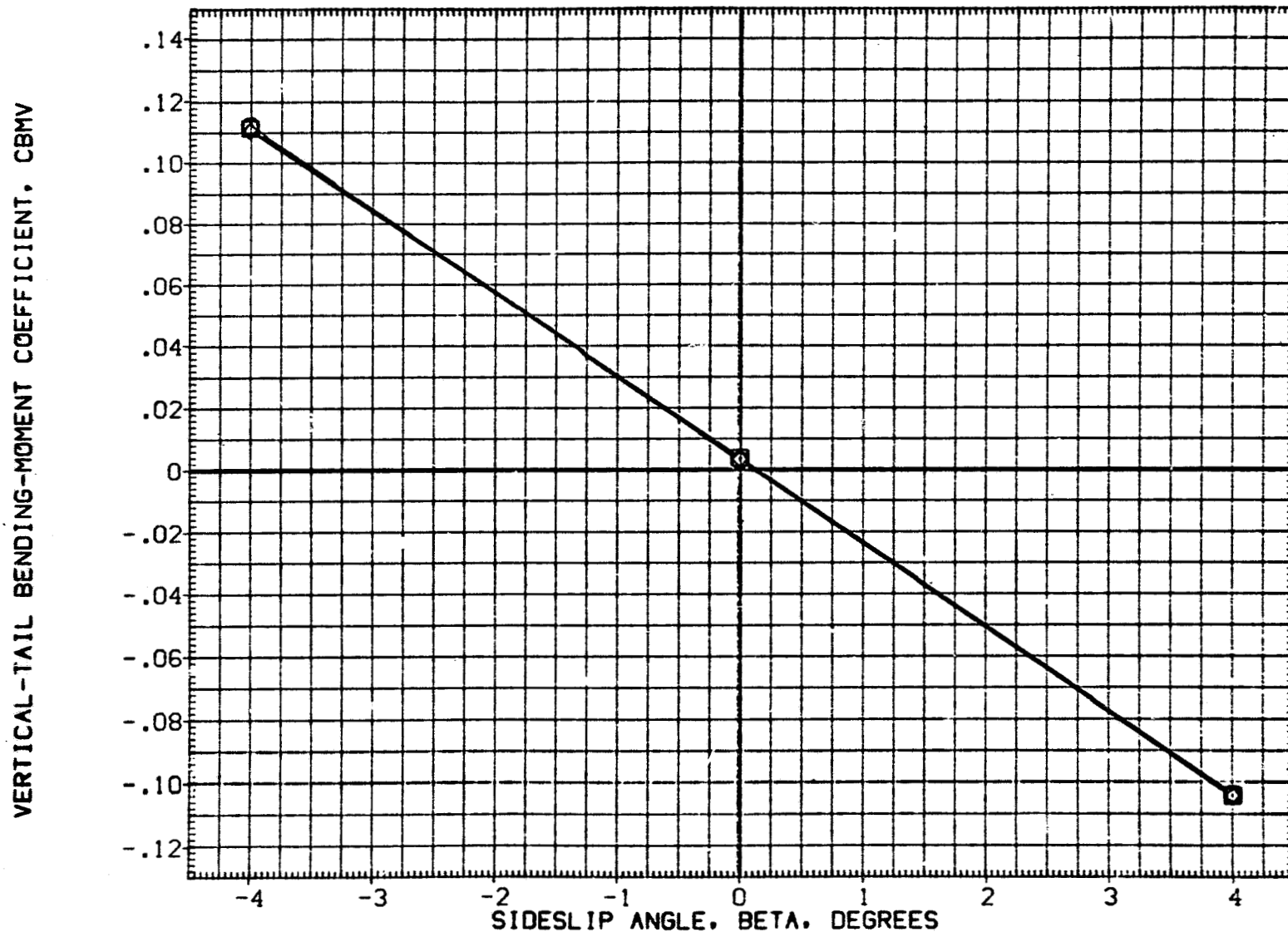


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0700

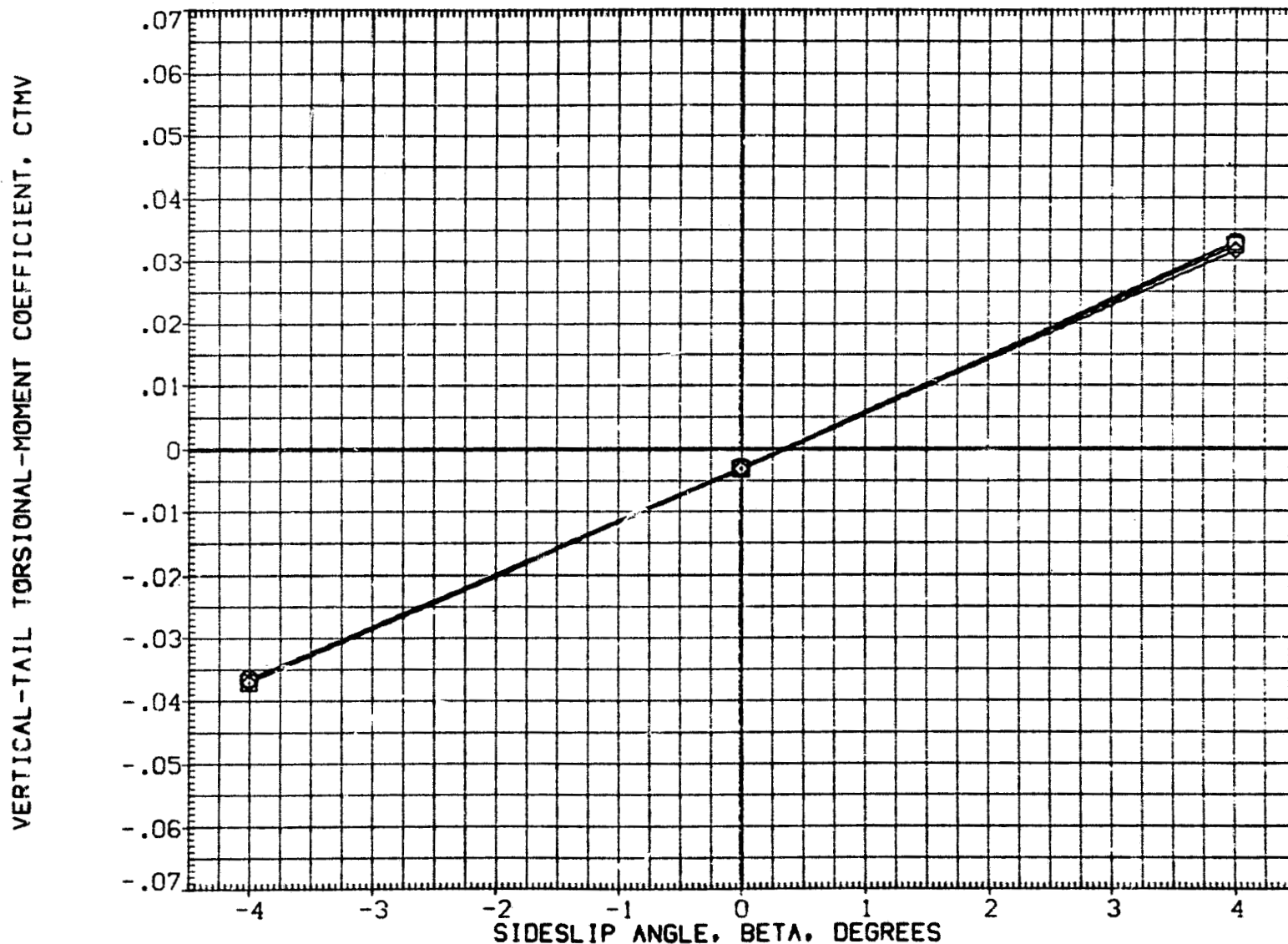


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000 SQ.FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000 IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

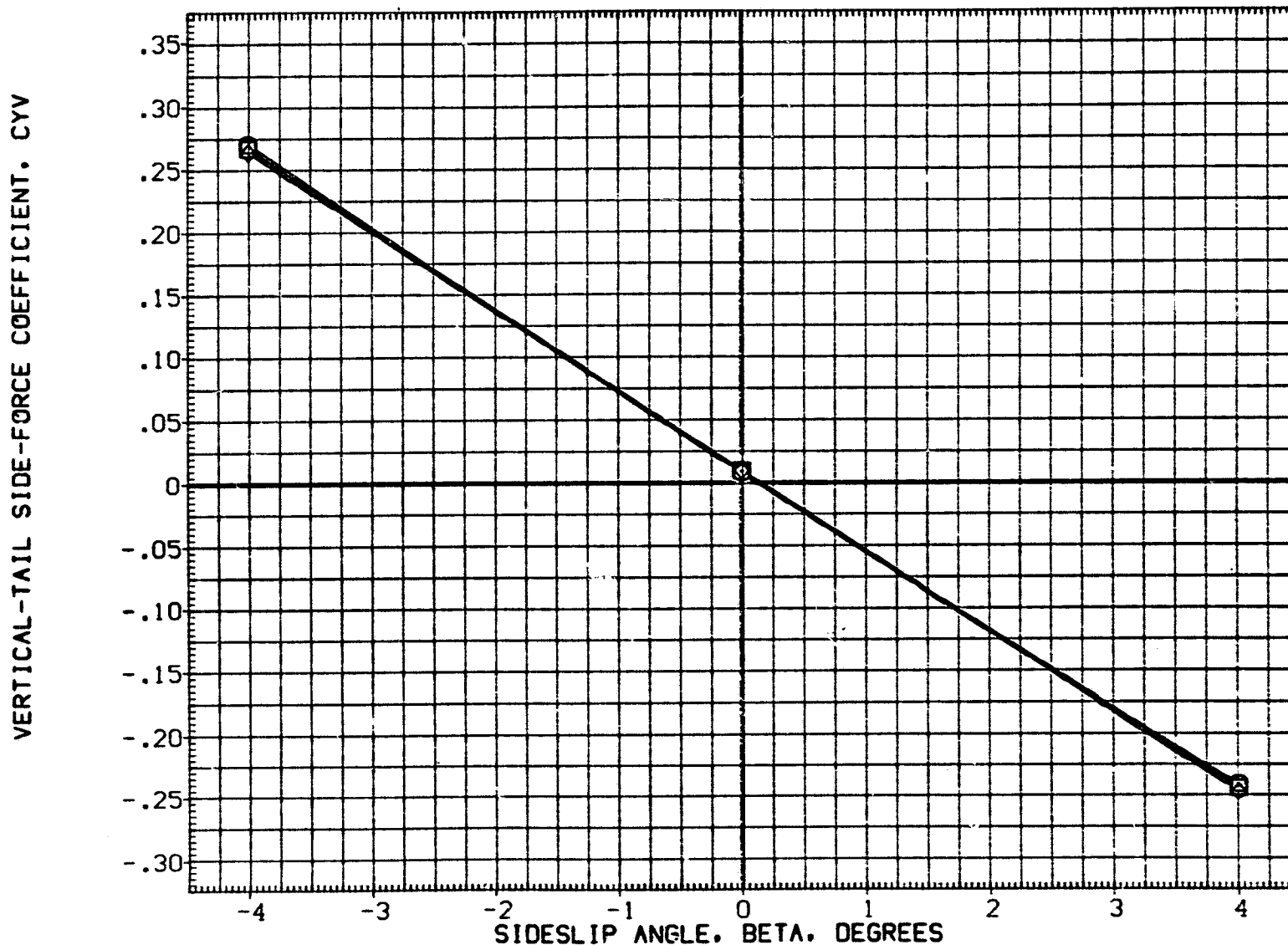


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y32)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	4.250	SREF	2690.0000	SQ.FT.
(RE4Y45)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	3.250	LREF	1290.3000	IN.
(RE4Y37)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	1.400	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0000	

HINGE-MOMENT COEFFICIENT FOR RUDDER, CHR

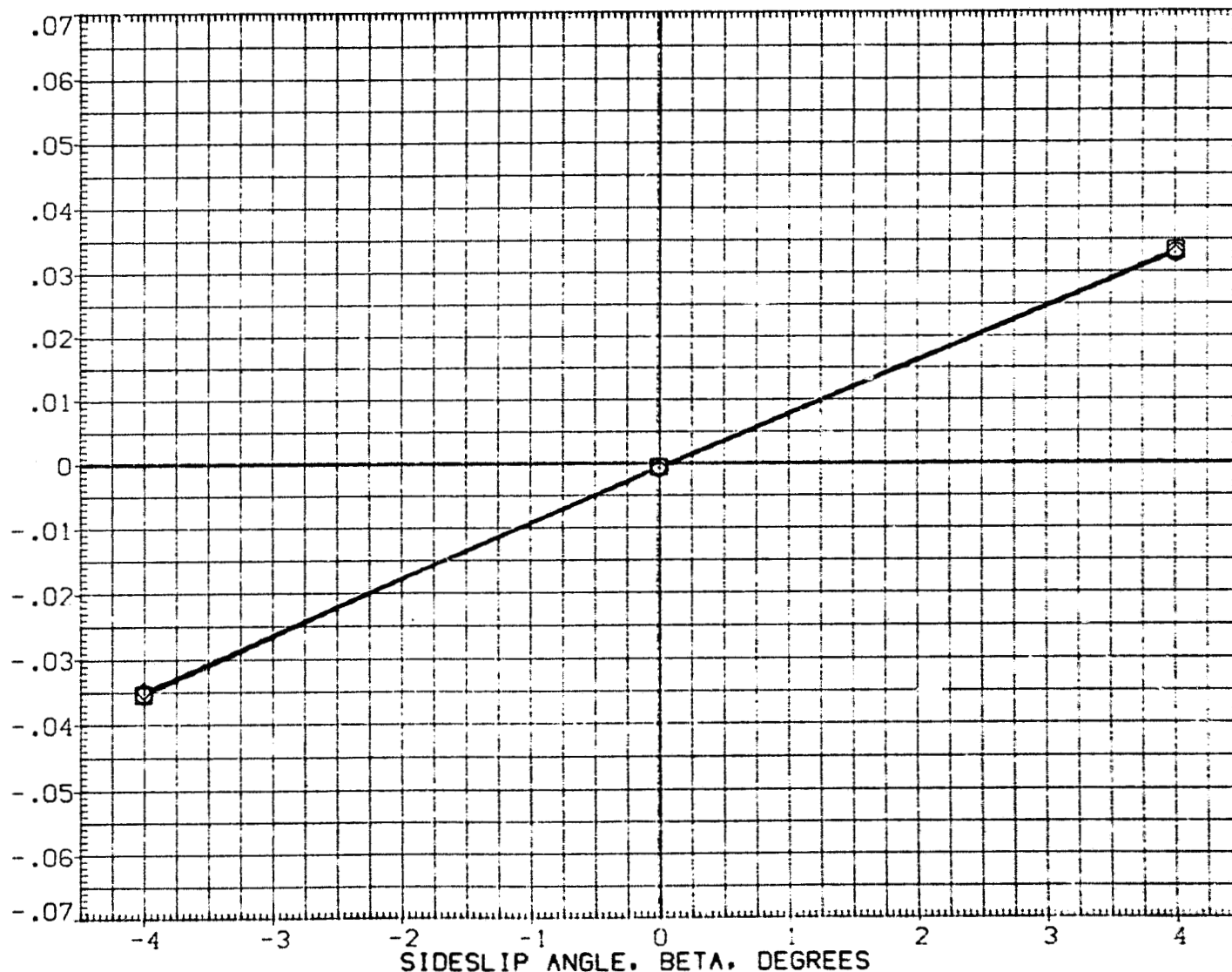


FIG. 103 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.4 PLUMES OFF

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ. FT.
(RE4X46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4X38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

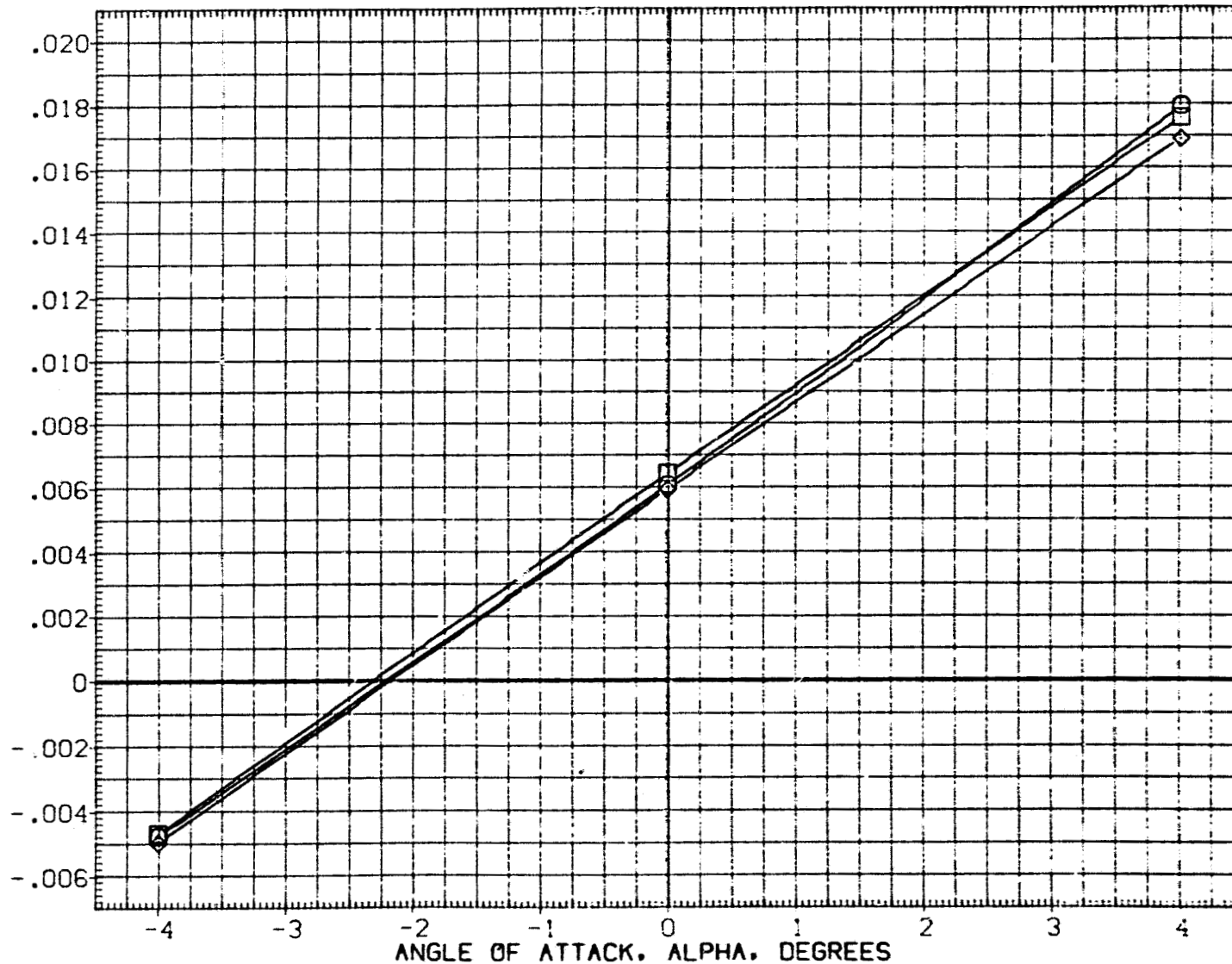


FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4X46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4X38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						YMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0000	

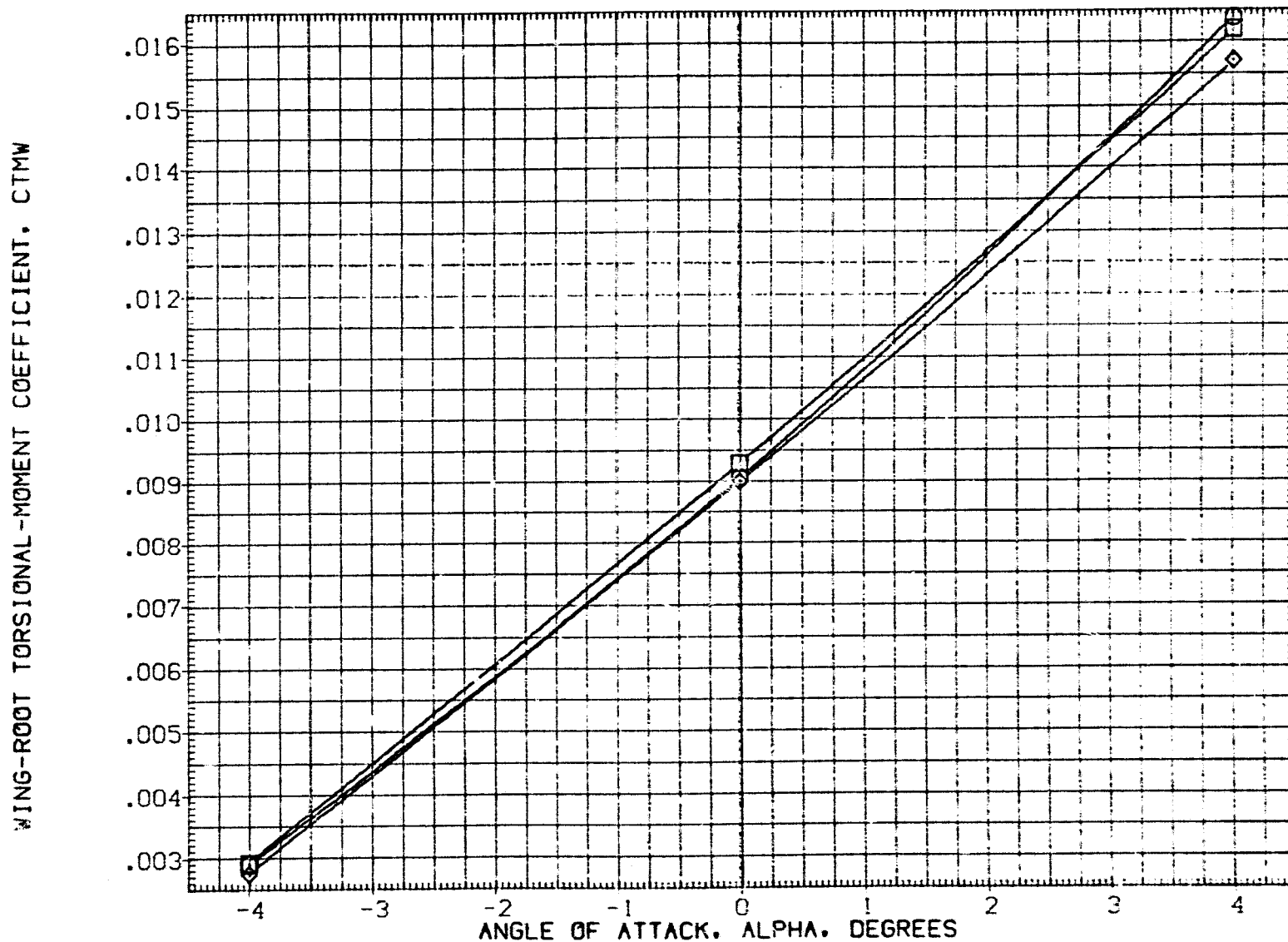


FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2890.0000 SQ.FT.
(RE4X46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4X38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

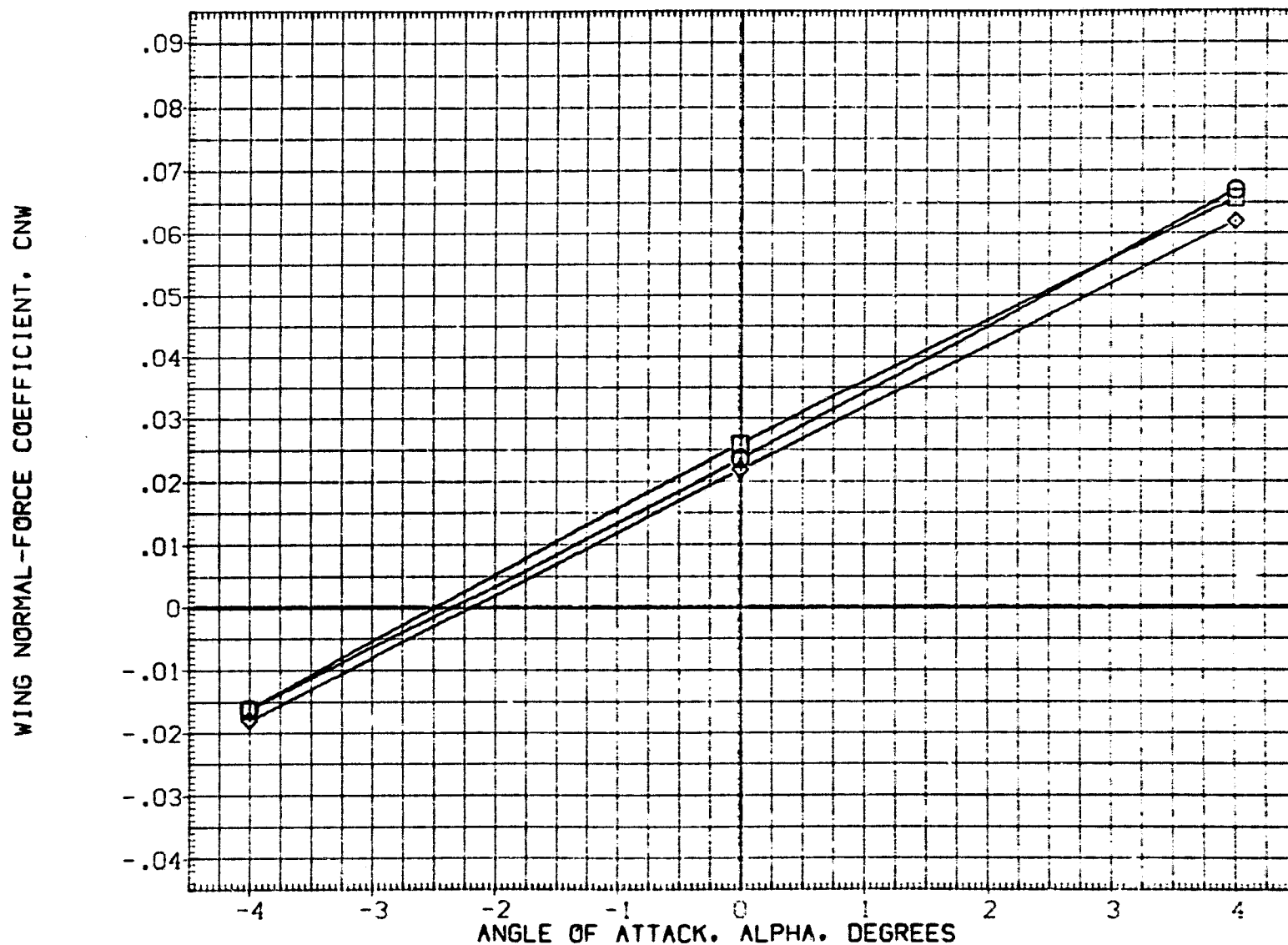





FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X20) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	50. FT.
(RE4X46) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4X38) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

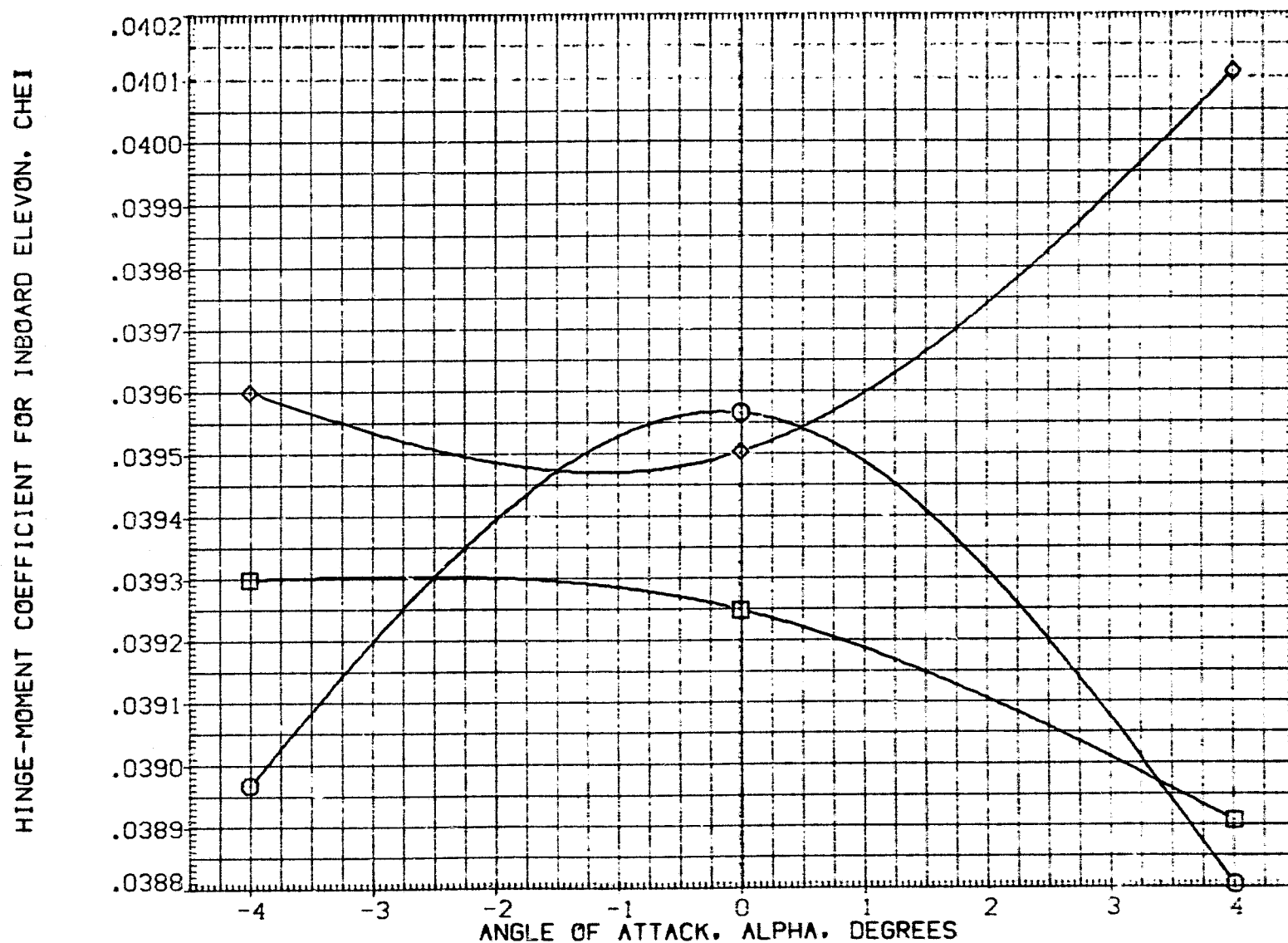


FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4X46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4X38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						YMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

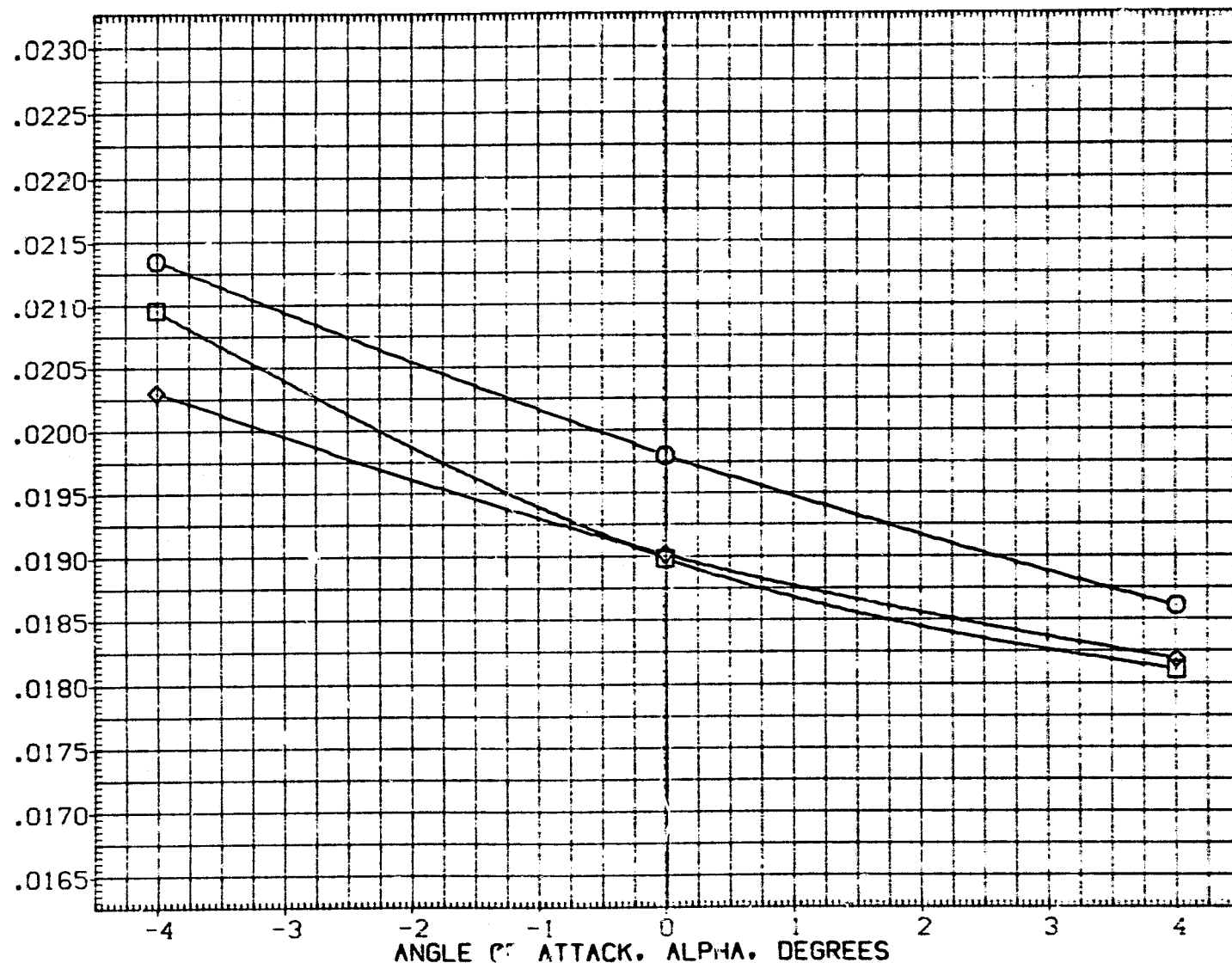


FIG. 104 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.6 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.25C	SREF	2690.0000 SQ.FT.
(RE4X47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4X39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

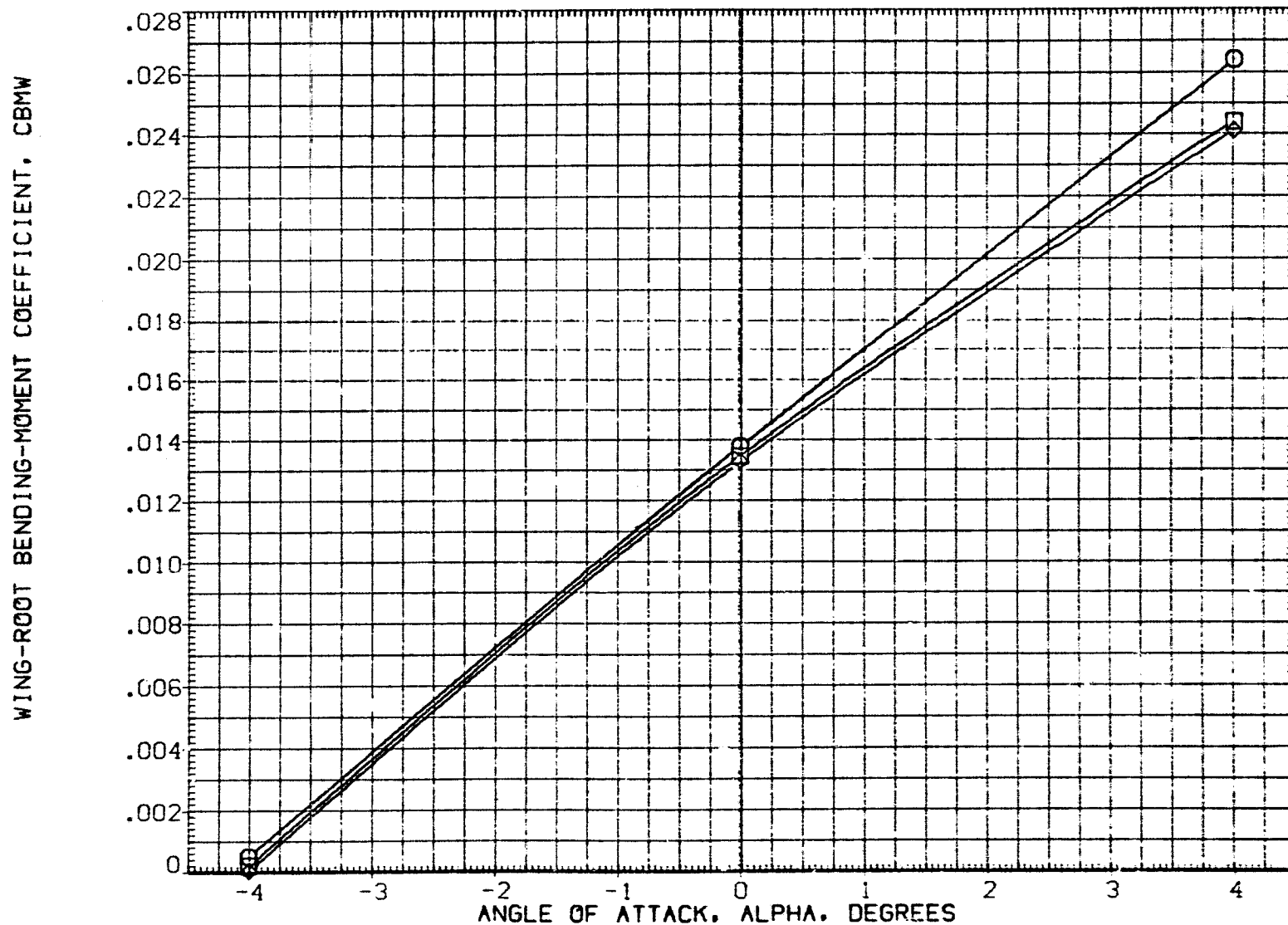


FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SG.FY.
(RE4X47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

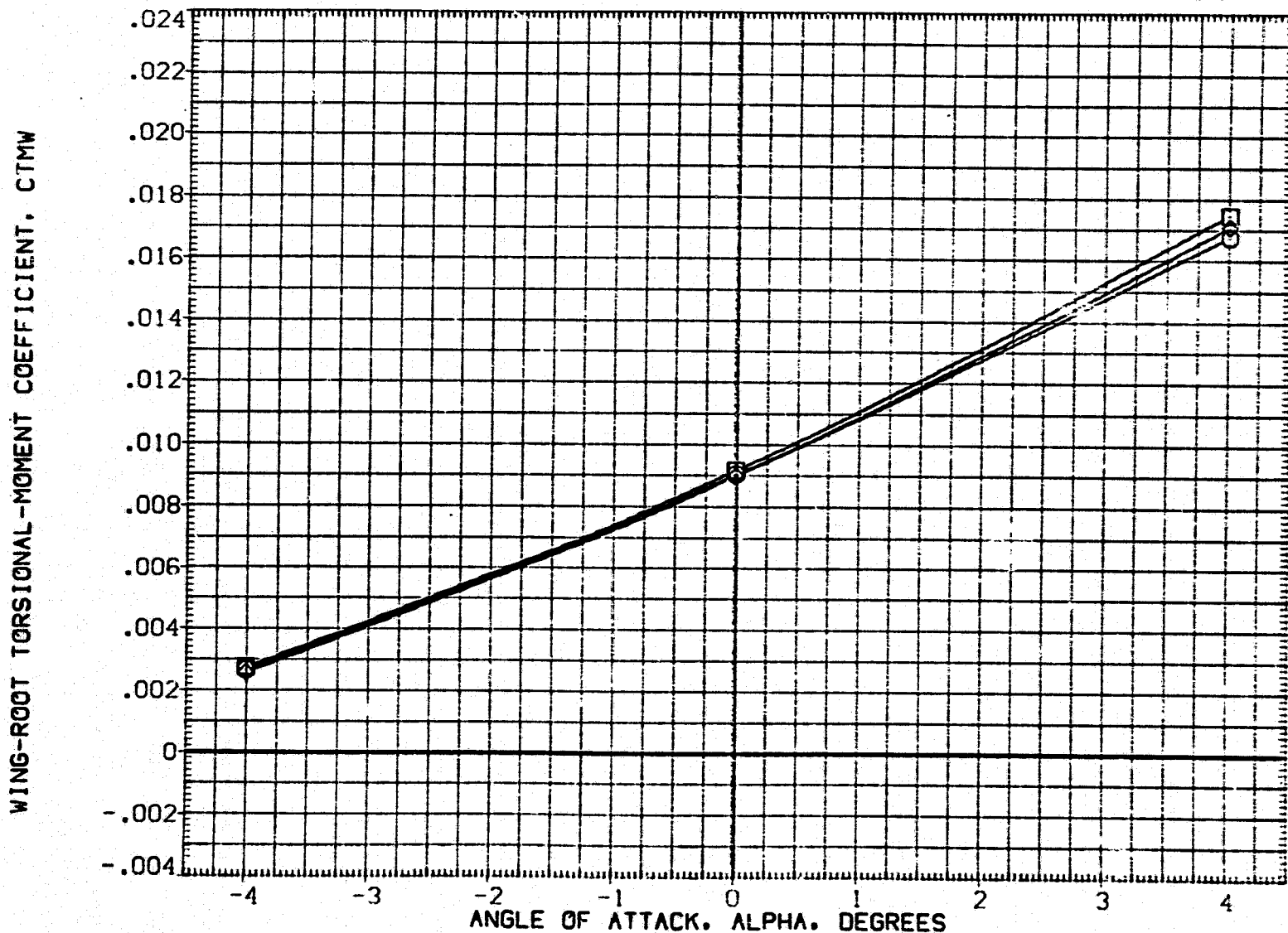





FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X47) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X39) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

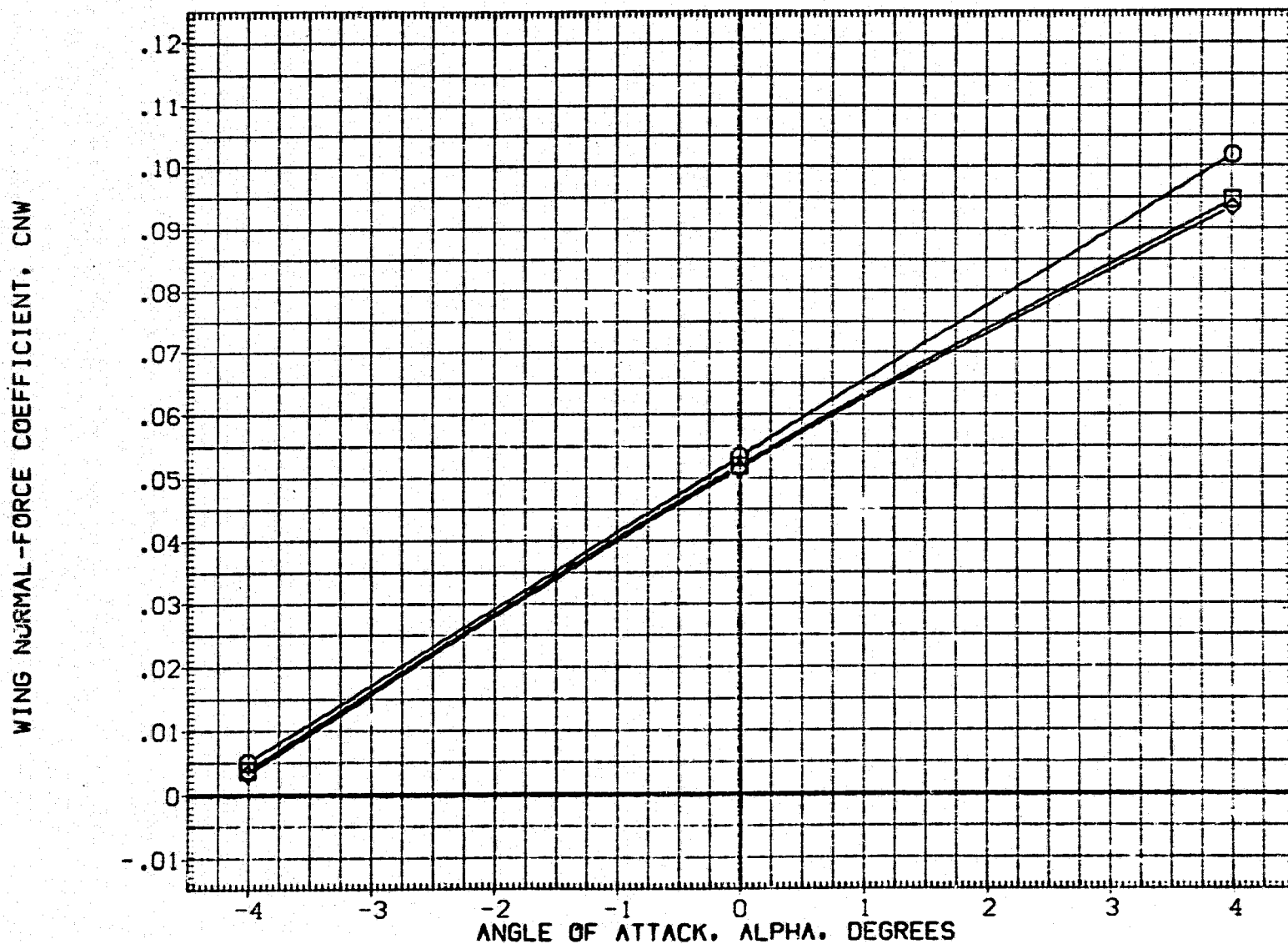


FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4X47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4X39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

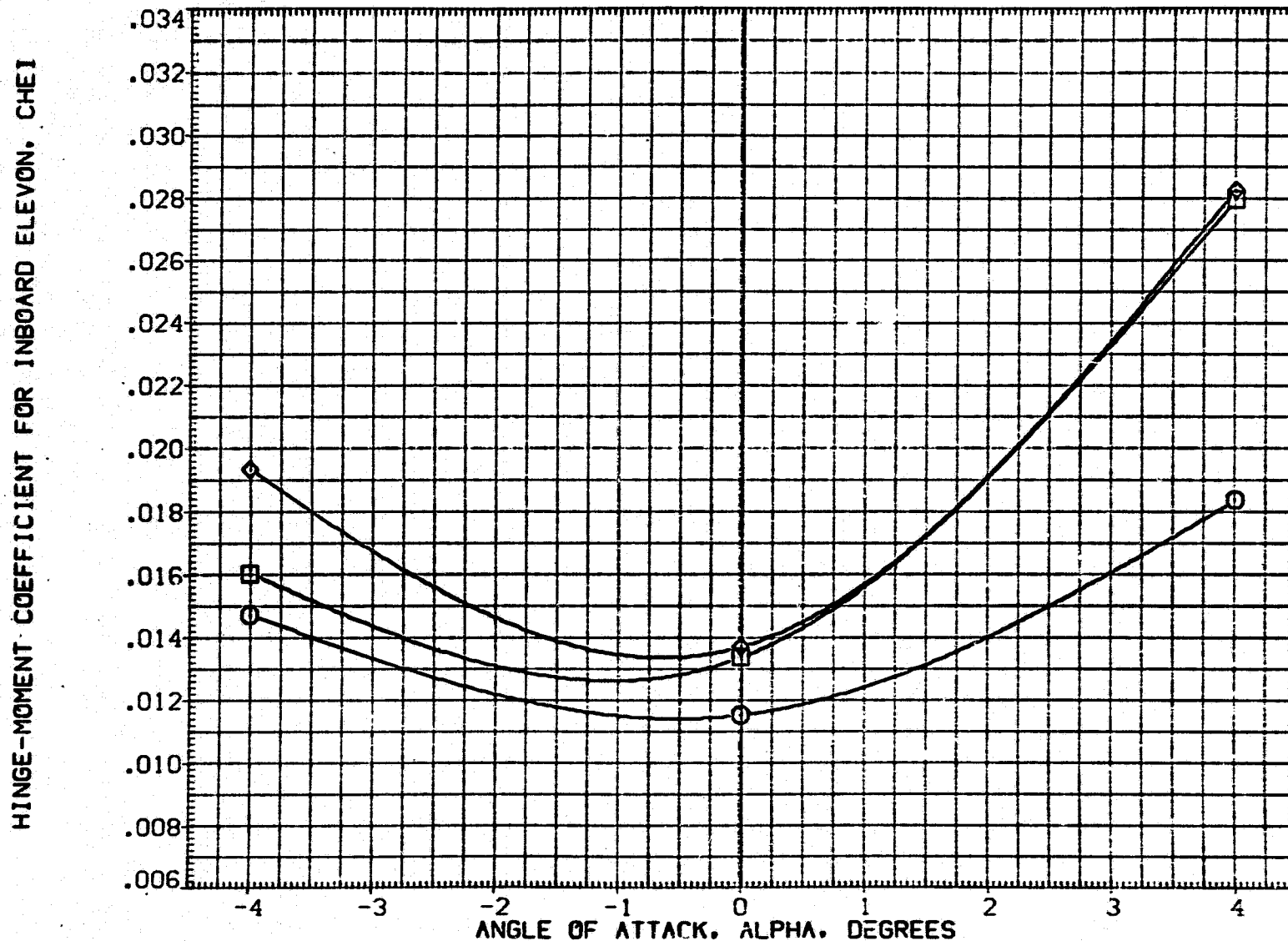


FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	50.FT.
(RE4X47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4X39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

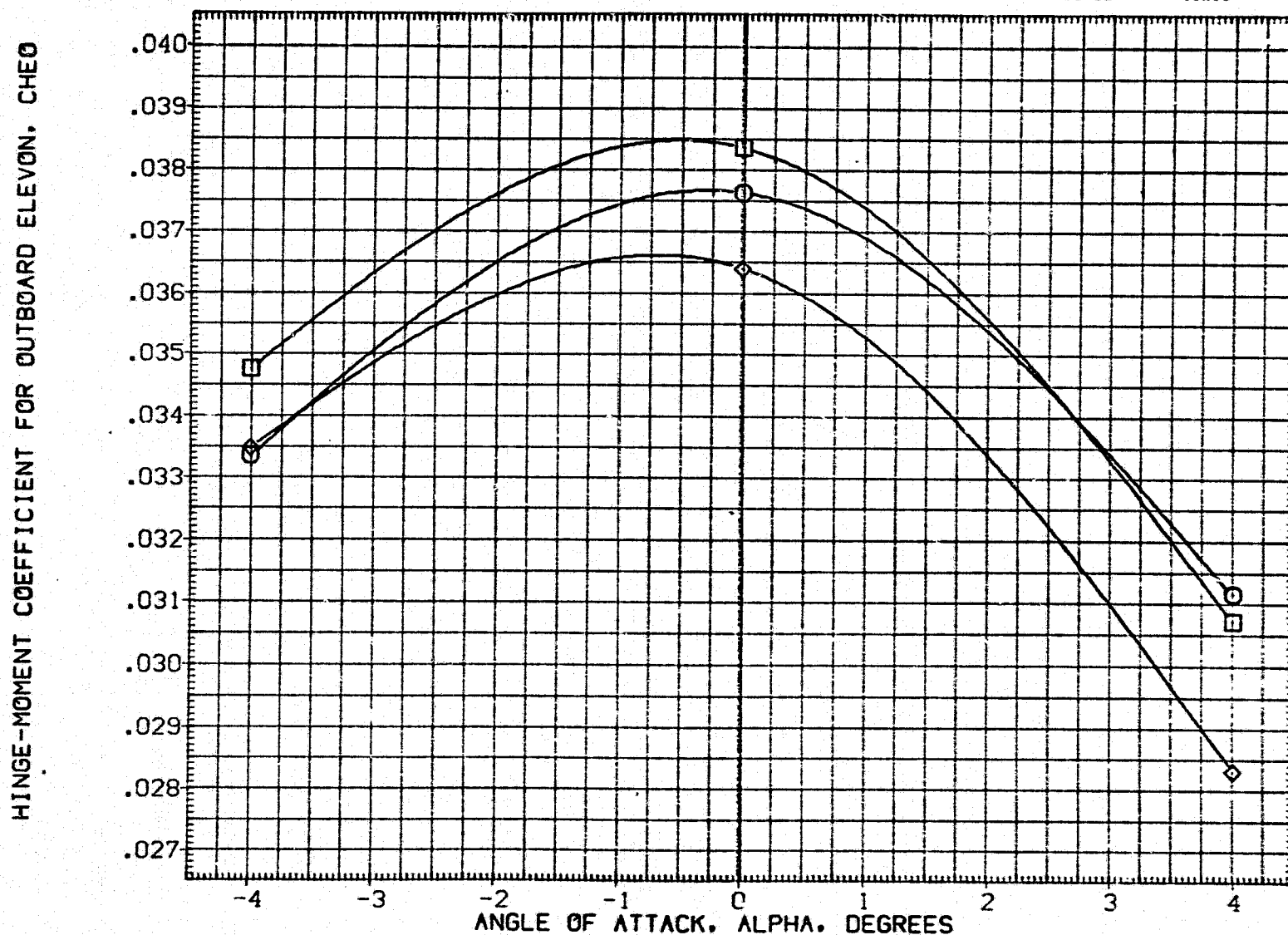


FIG. 105 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=0.9 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	53.FT.
(RE4X48)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4X40)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

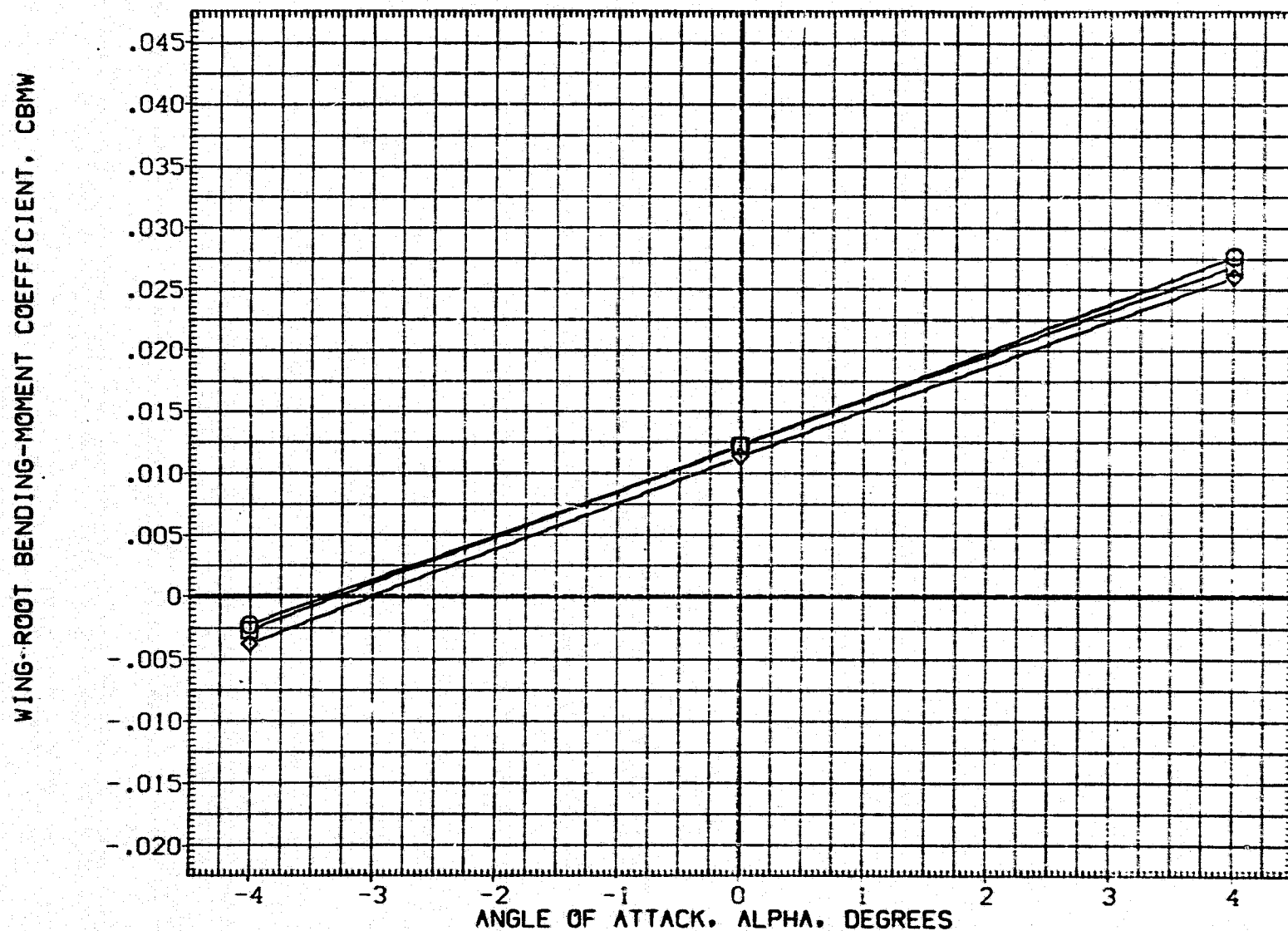





FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4X22) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ. FT.
(RE4X48) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4X40) 	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

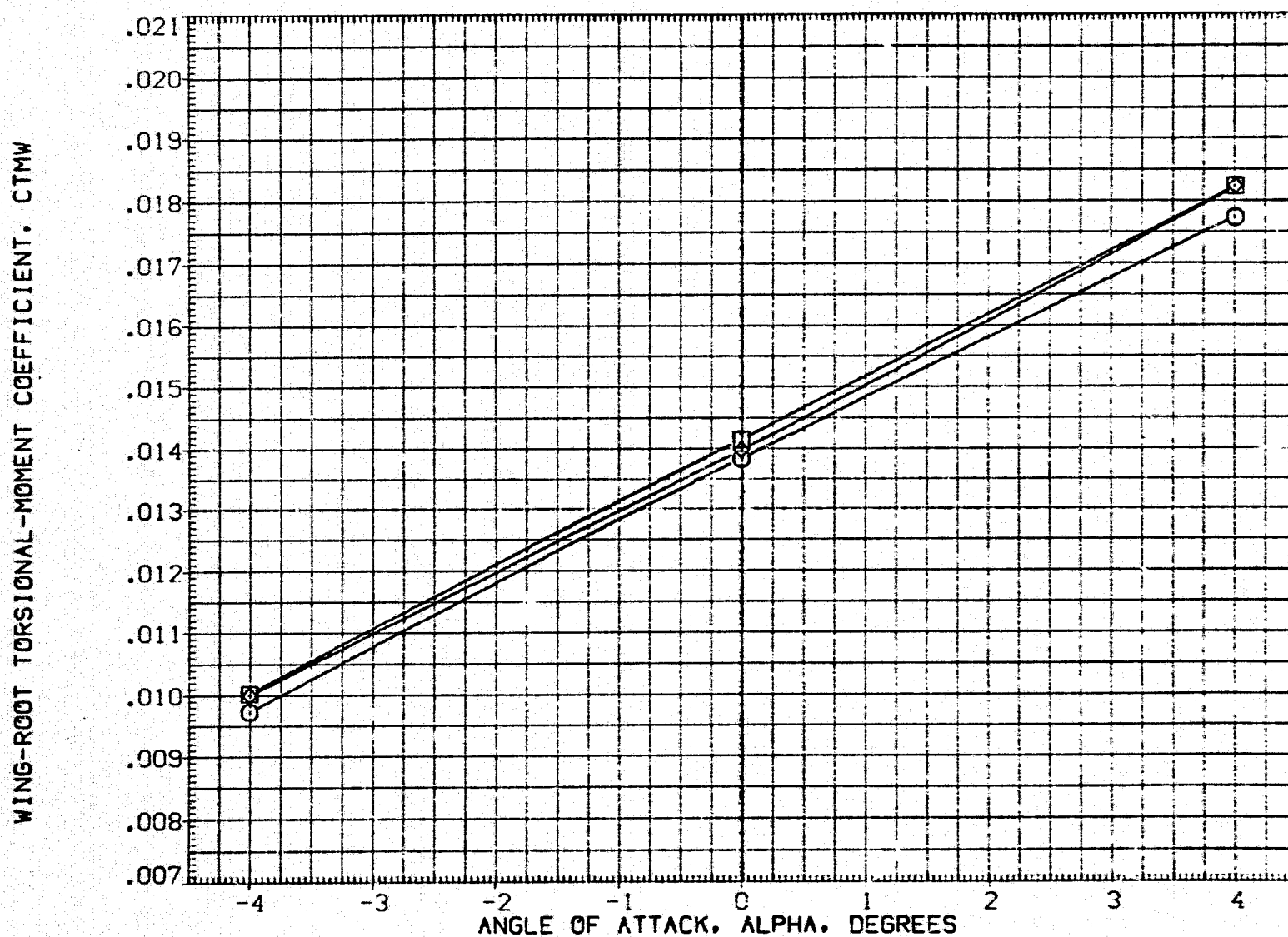


FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OR	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50 FT.
(RE4X48) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4X40) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

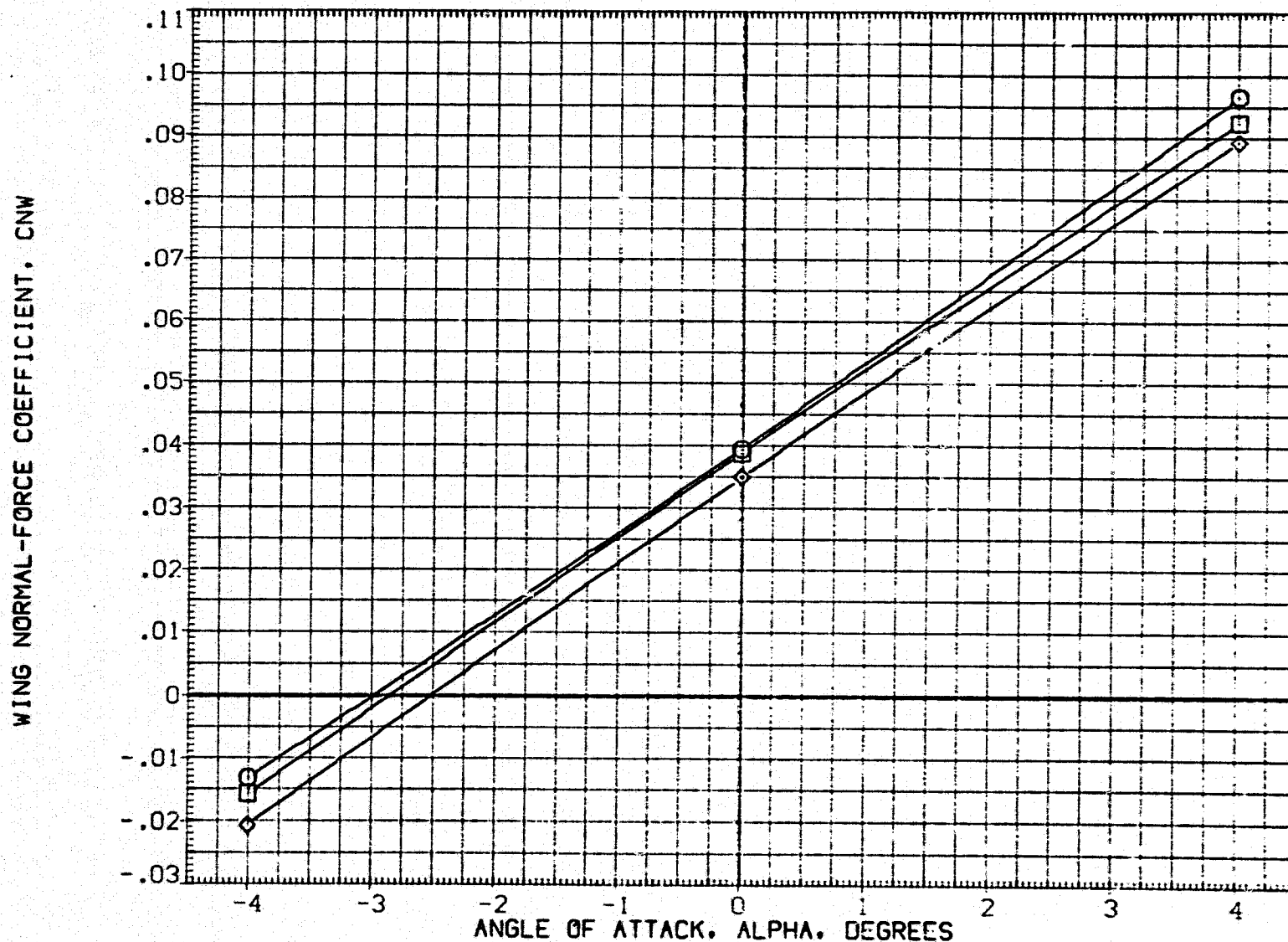


FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4X40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						AMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

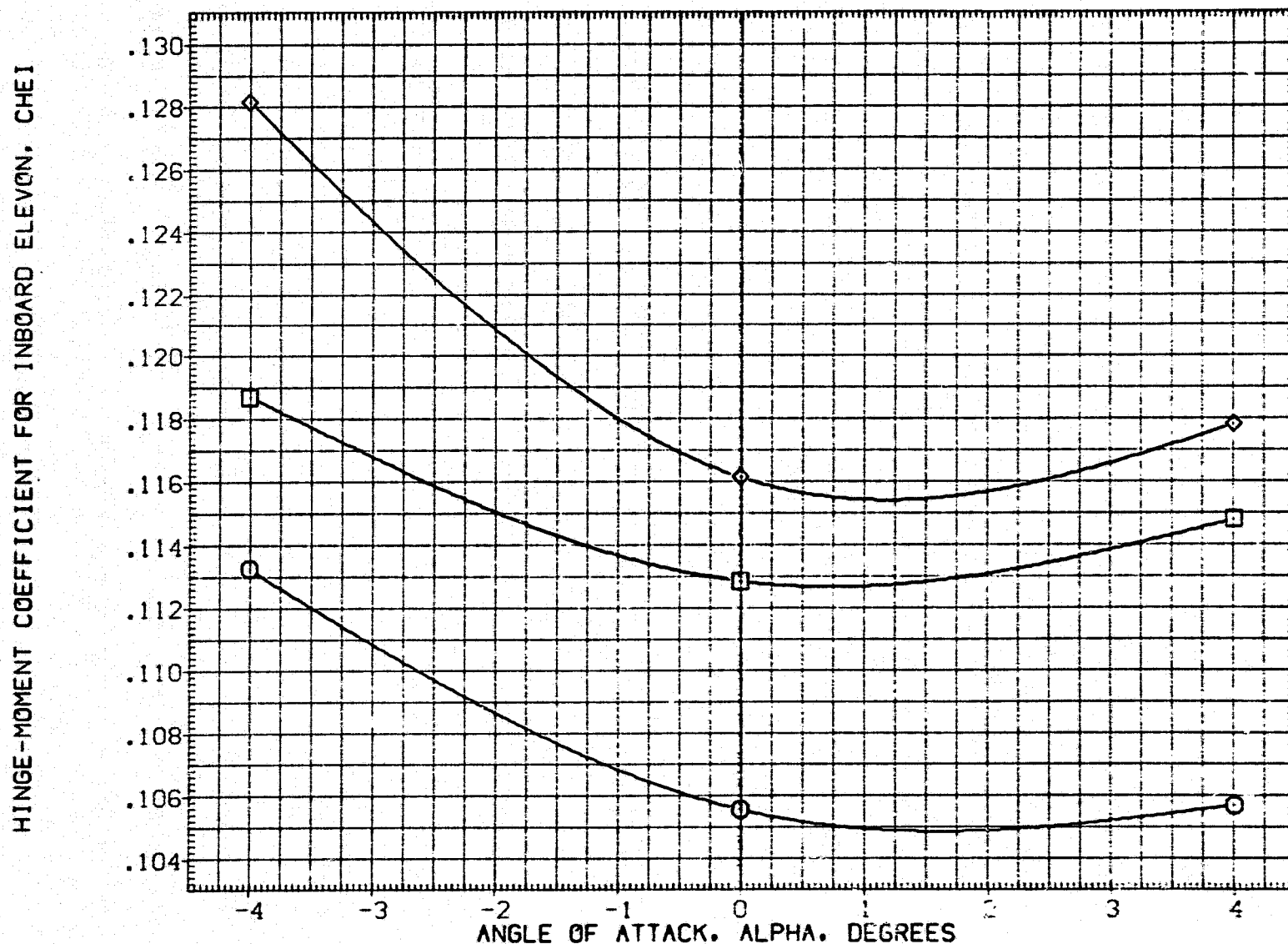


FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4X22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4X48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	REF	1290.3000	IN.
(RE4X40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

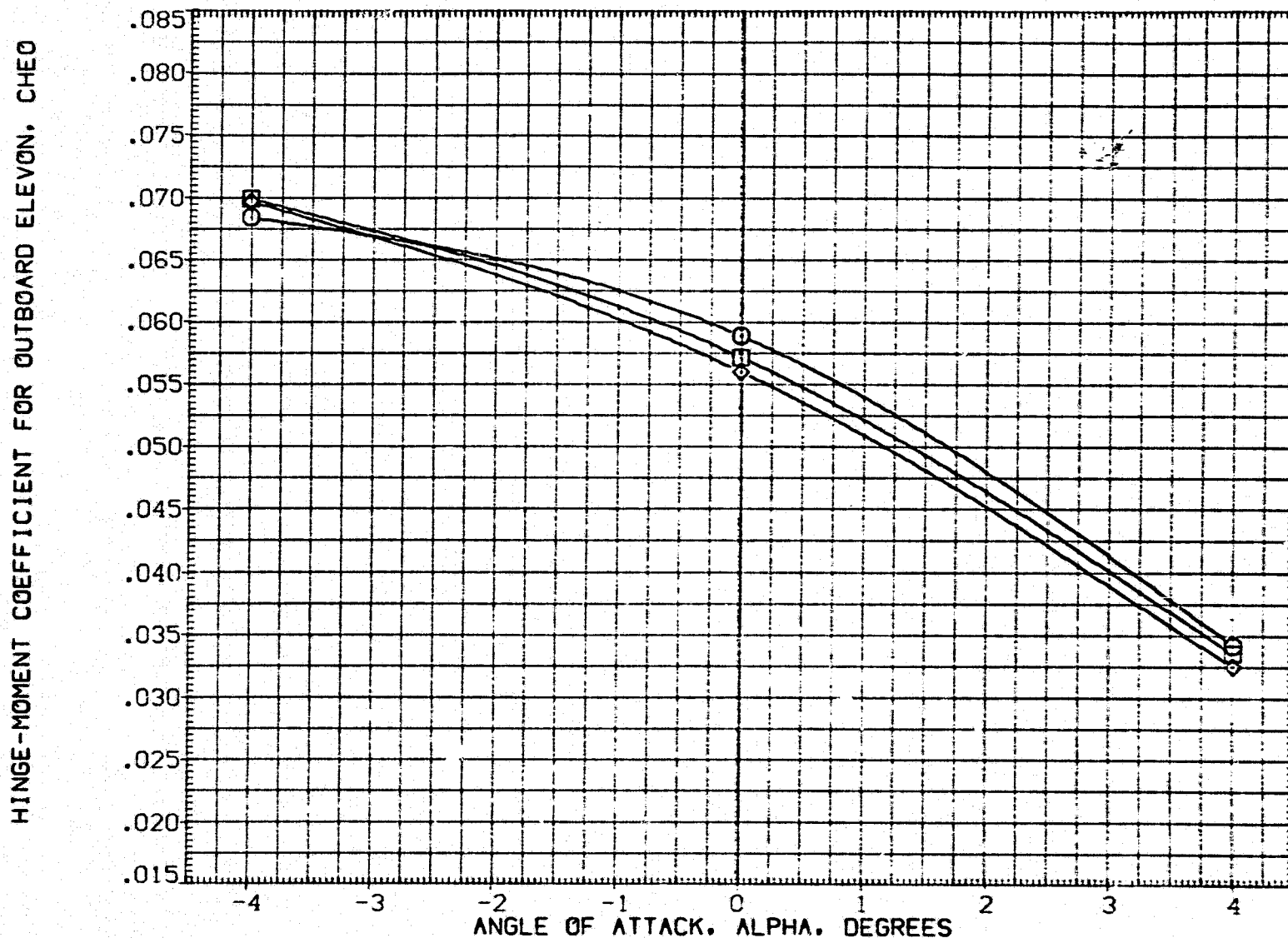


FIG. 106 EFFECT OF REYNOLDS NUMBER IN PITCH, MACH=1.1 PLUMES ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-09	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

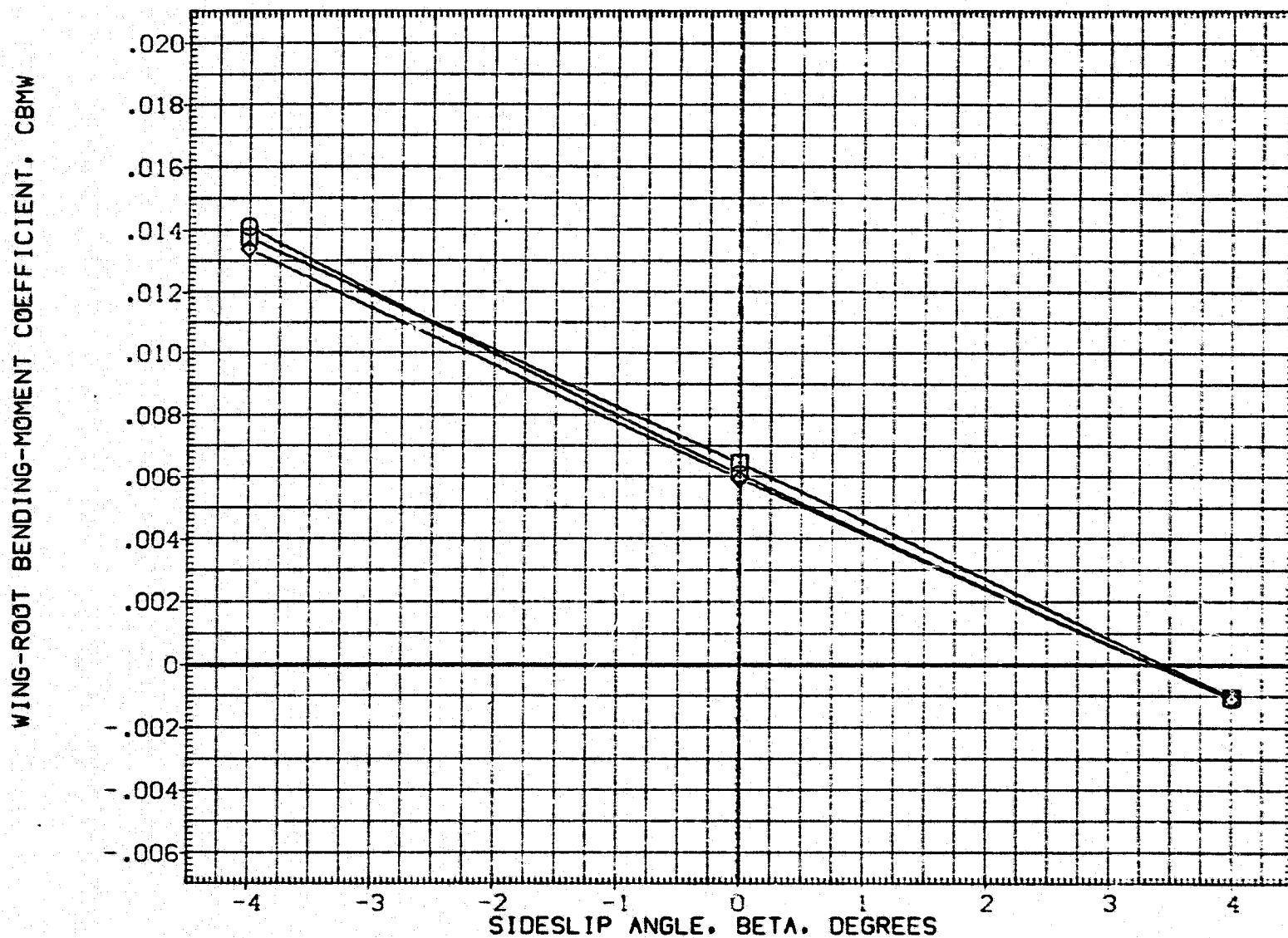


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) $\alpha = .00$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SQ.FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

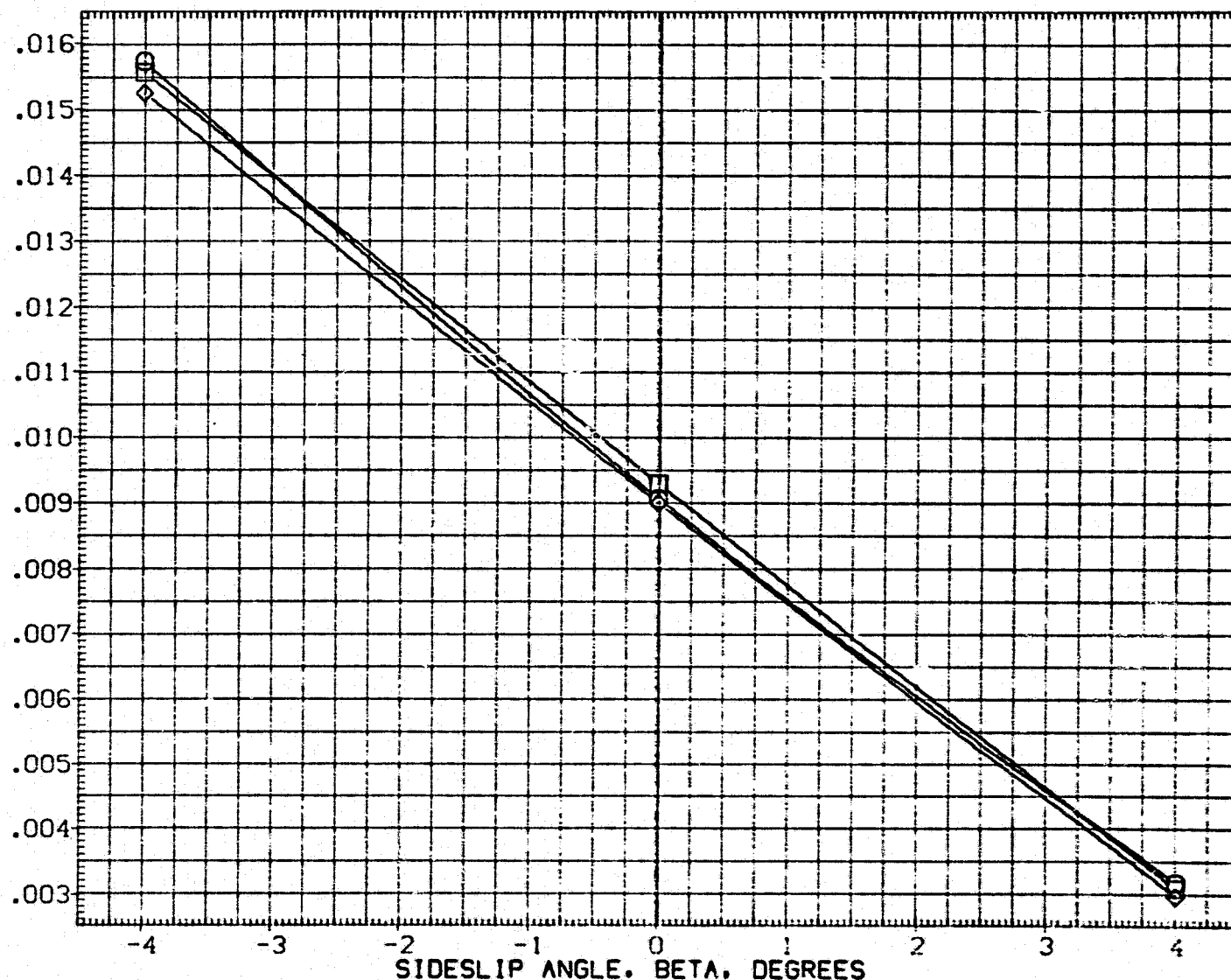


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20) ○	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SC.FT.
(RE4Y46) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y38) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMHP	.0000	IN.
						YMHP	.0000	IN.
						ZMHP	.0000	IN.
						SCALE	.0200	IN.

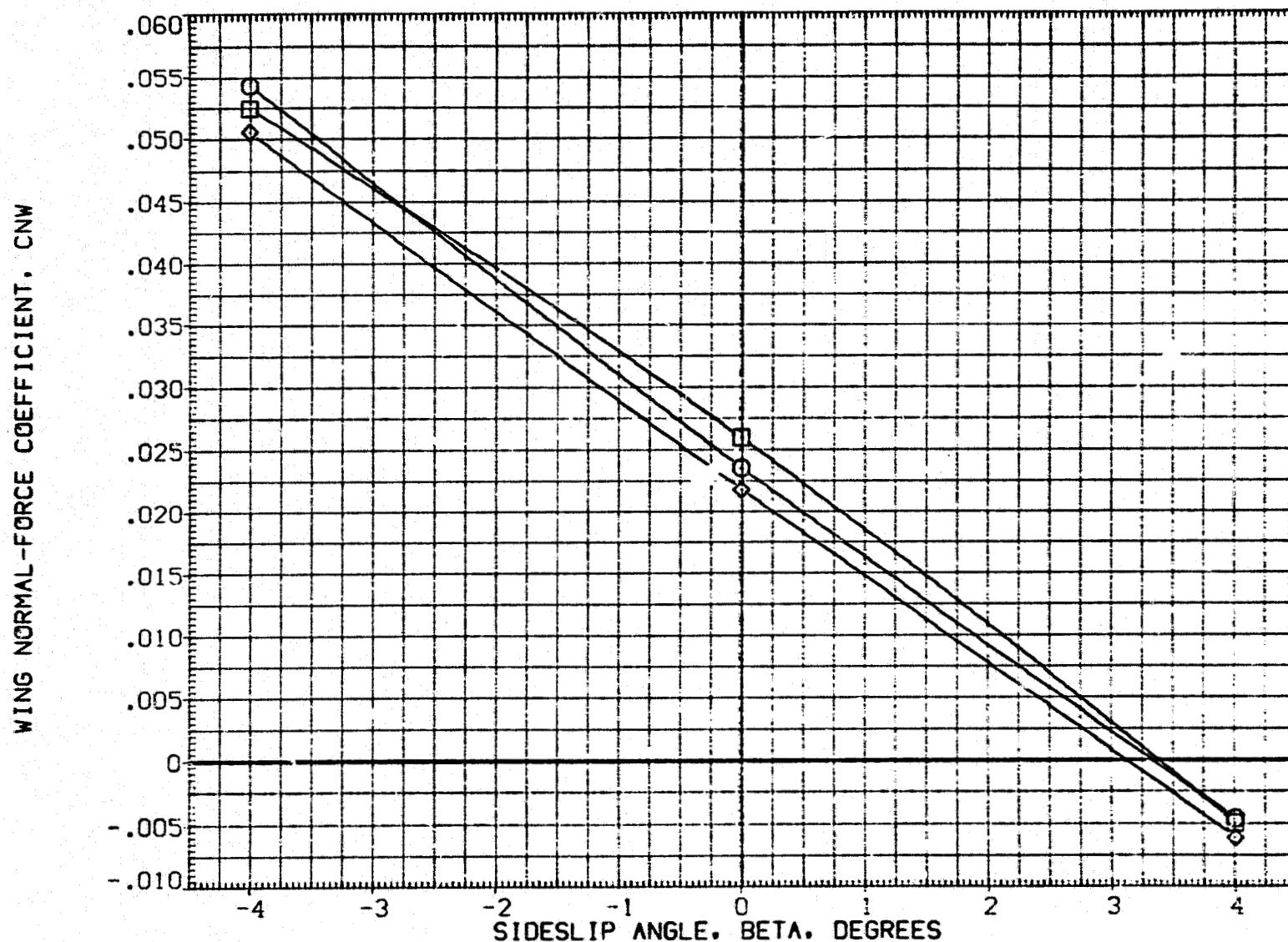


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y46)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y38)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						VMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0000

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

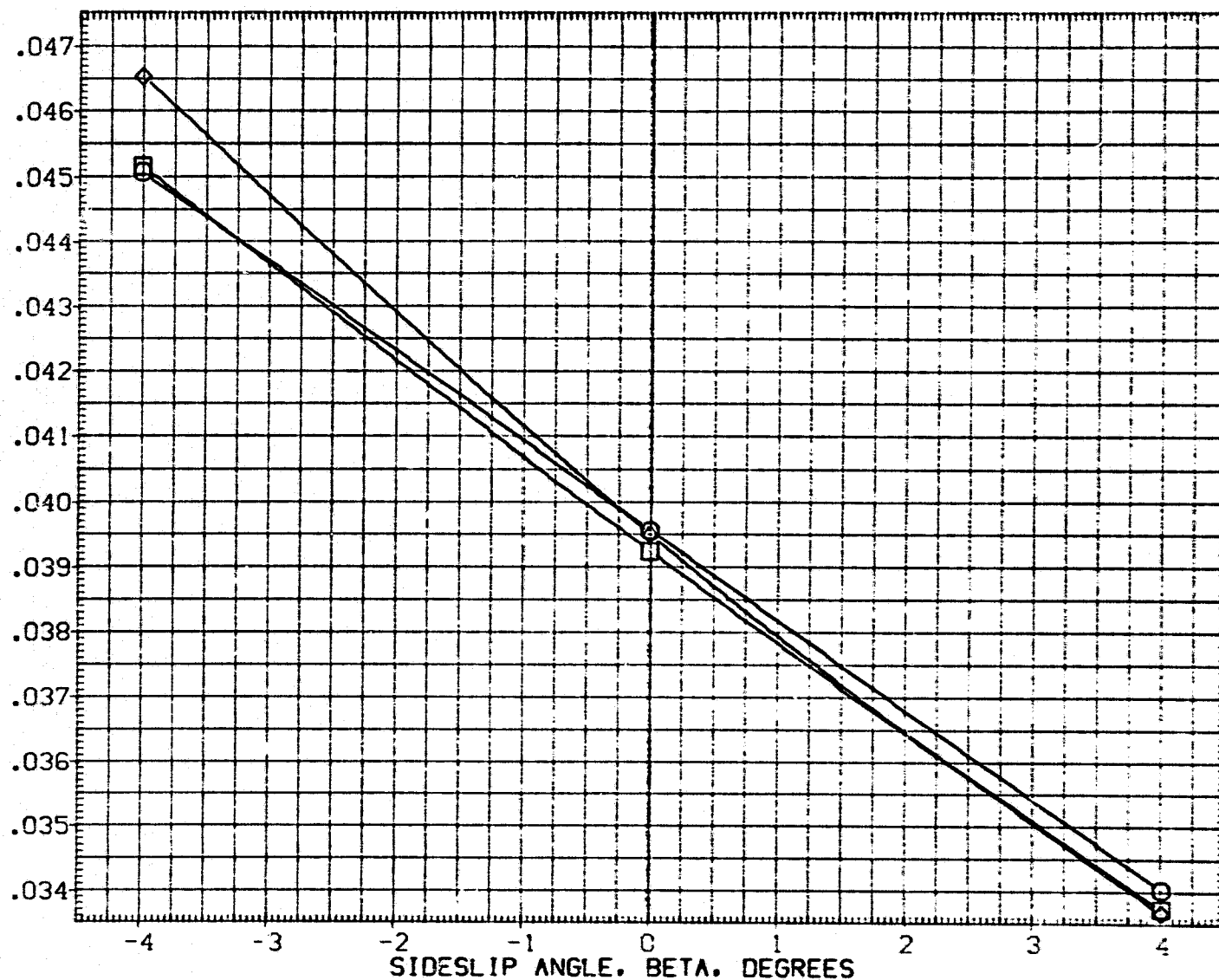


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	50. FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.300	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0.00	

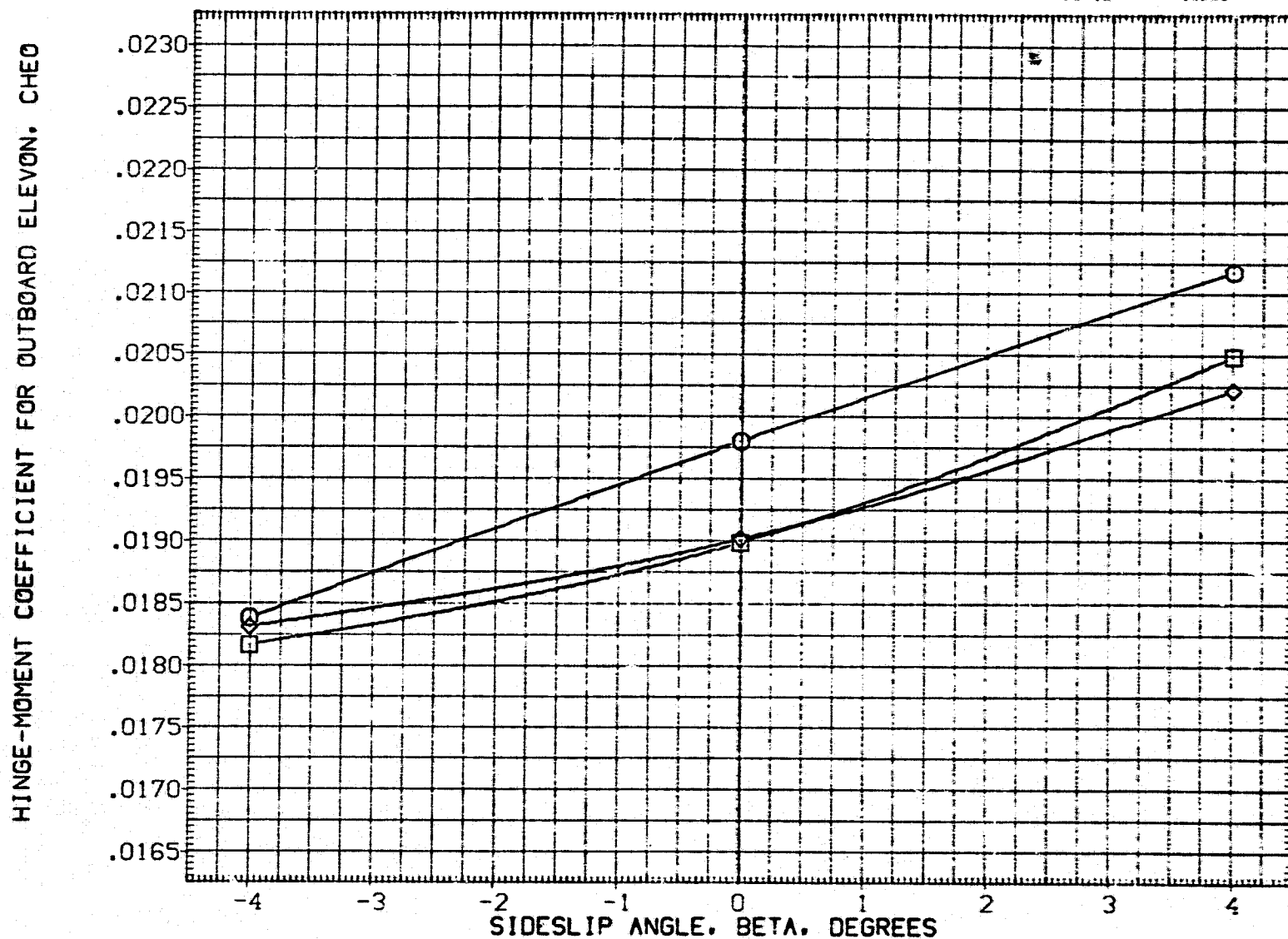


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

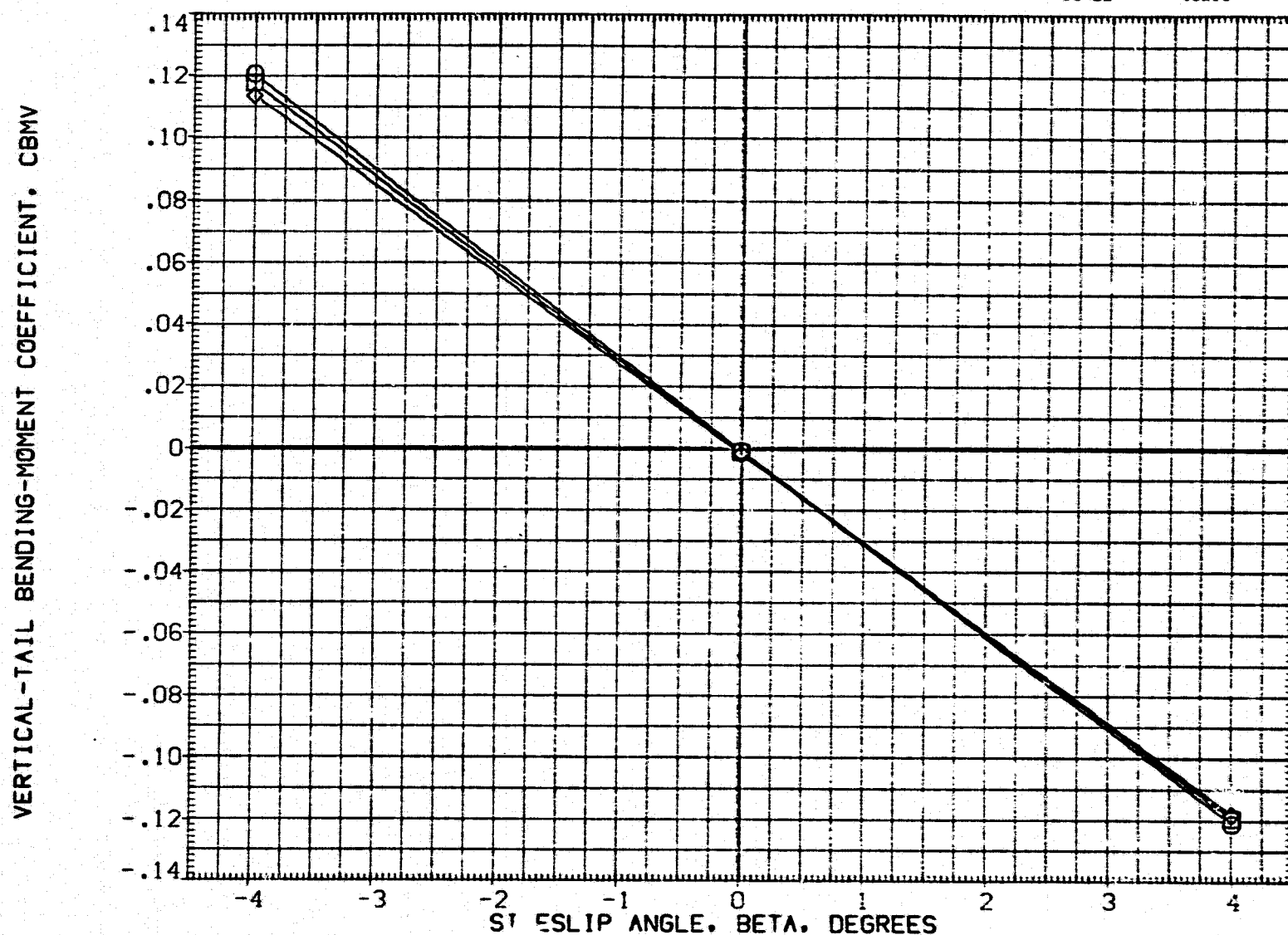


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF 2690.0000 SQ.FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF 1290.3000 IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

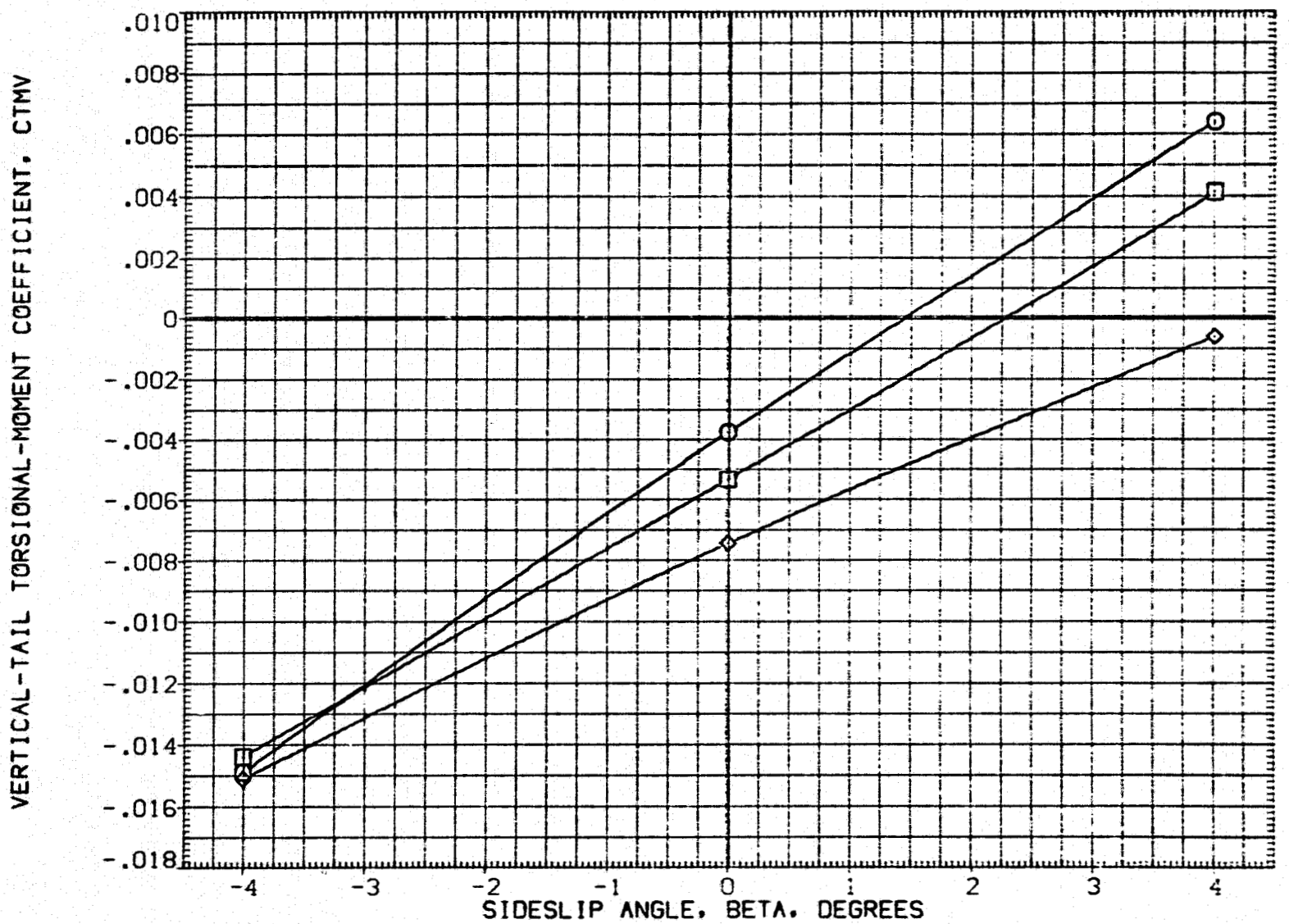


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF 2690.0000 SQ.FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF 1290.3000 IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

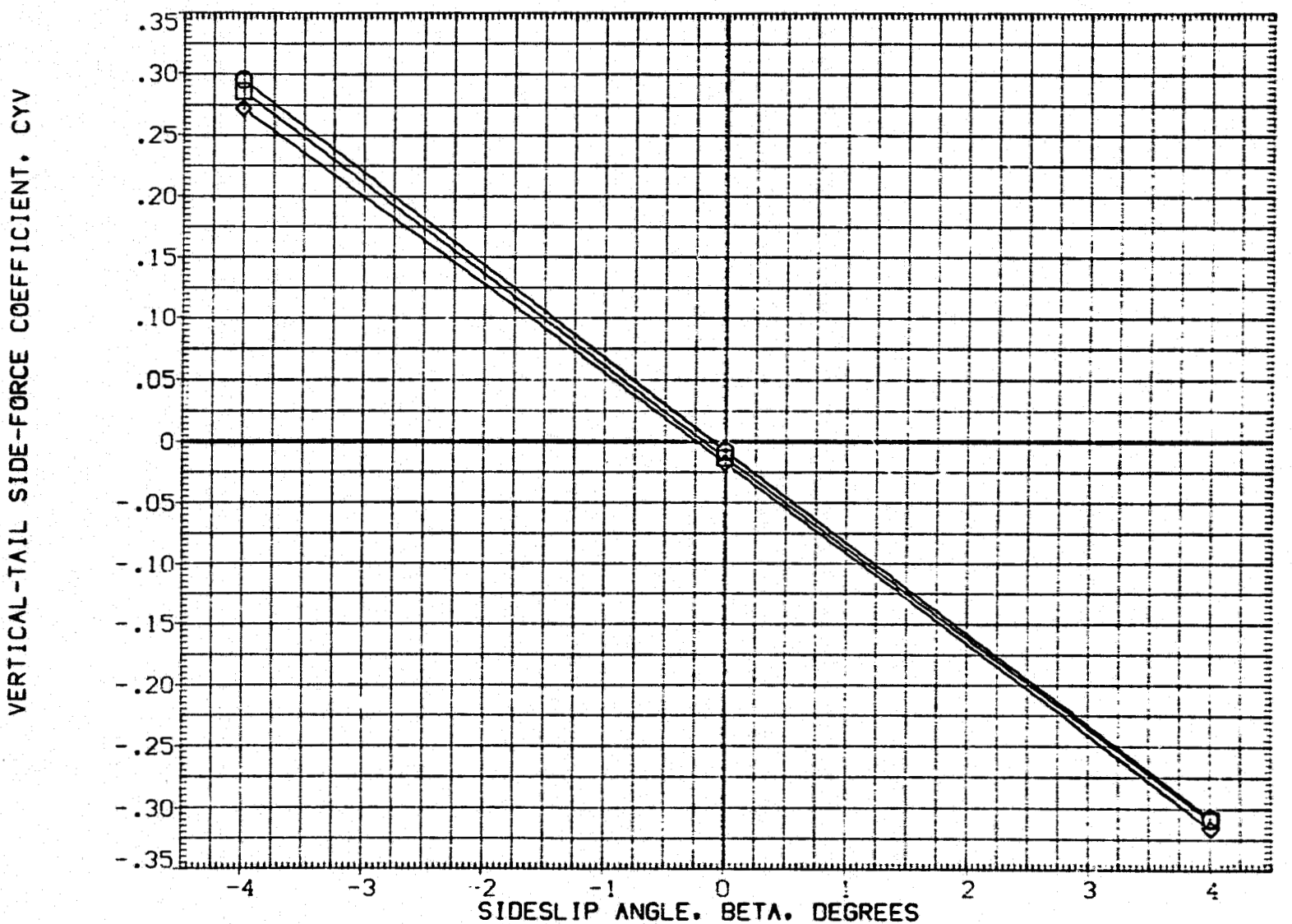


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000 SQ.FT.
(RE4Y46)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000 IN.
(RE4Y38)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

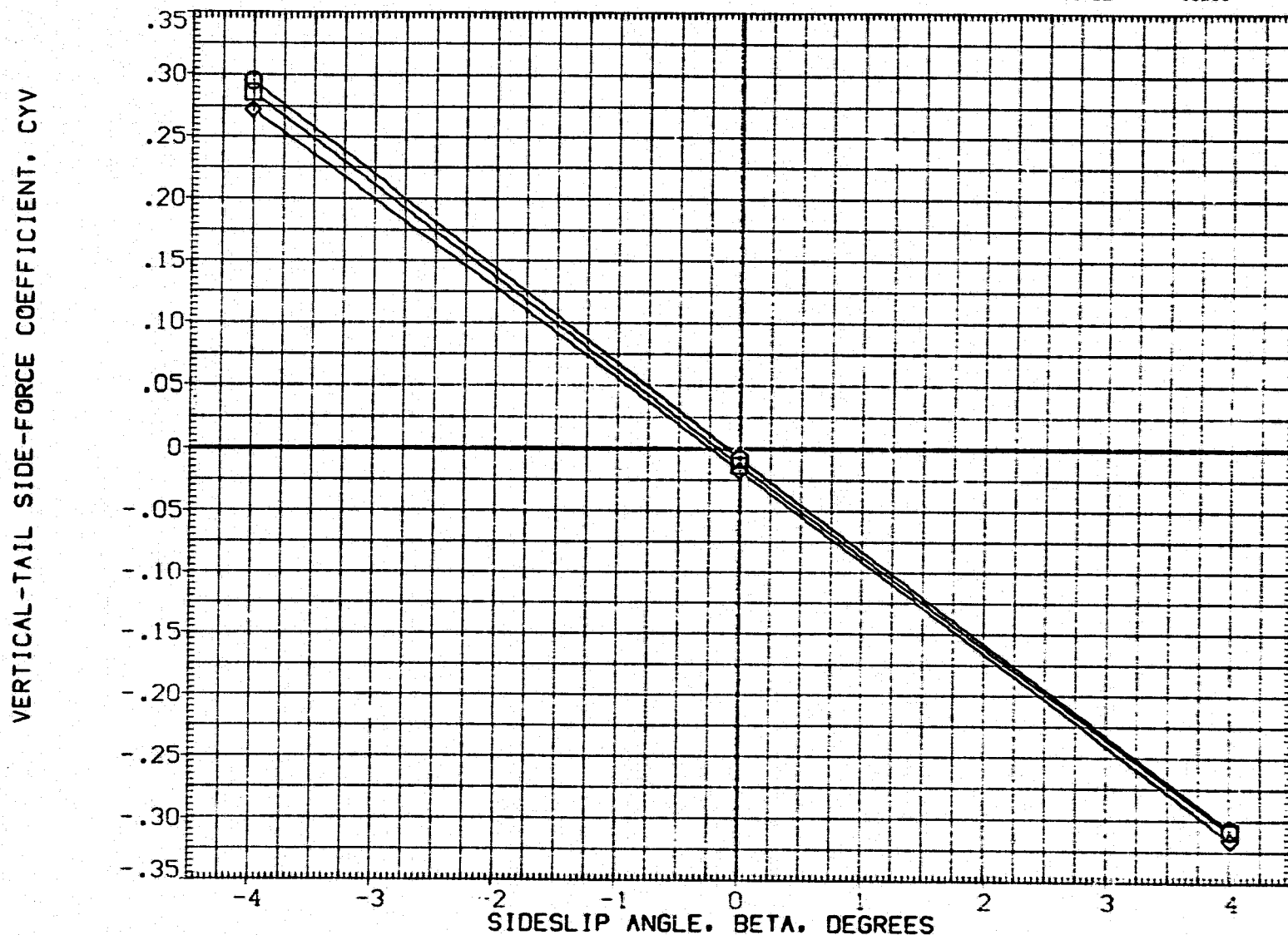


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	3.400	SREF	2690.0000	SG.FT.
(RE4Y46)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	2.500	LREF	1290.3000	IN.
(RE4Y38)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.600	1.750	BREF	1290.3000	IN.
						XMPP	.0000	IN.
						YMPP	.0000	IN.
						ZMPP	.0000	IN.
						SCALE	.0200	

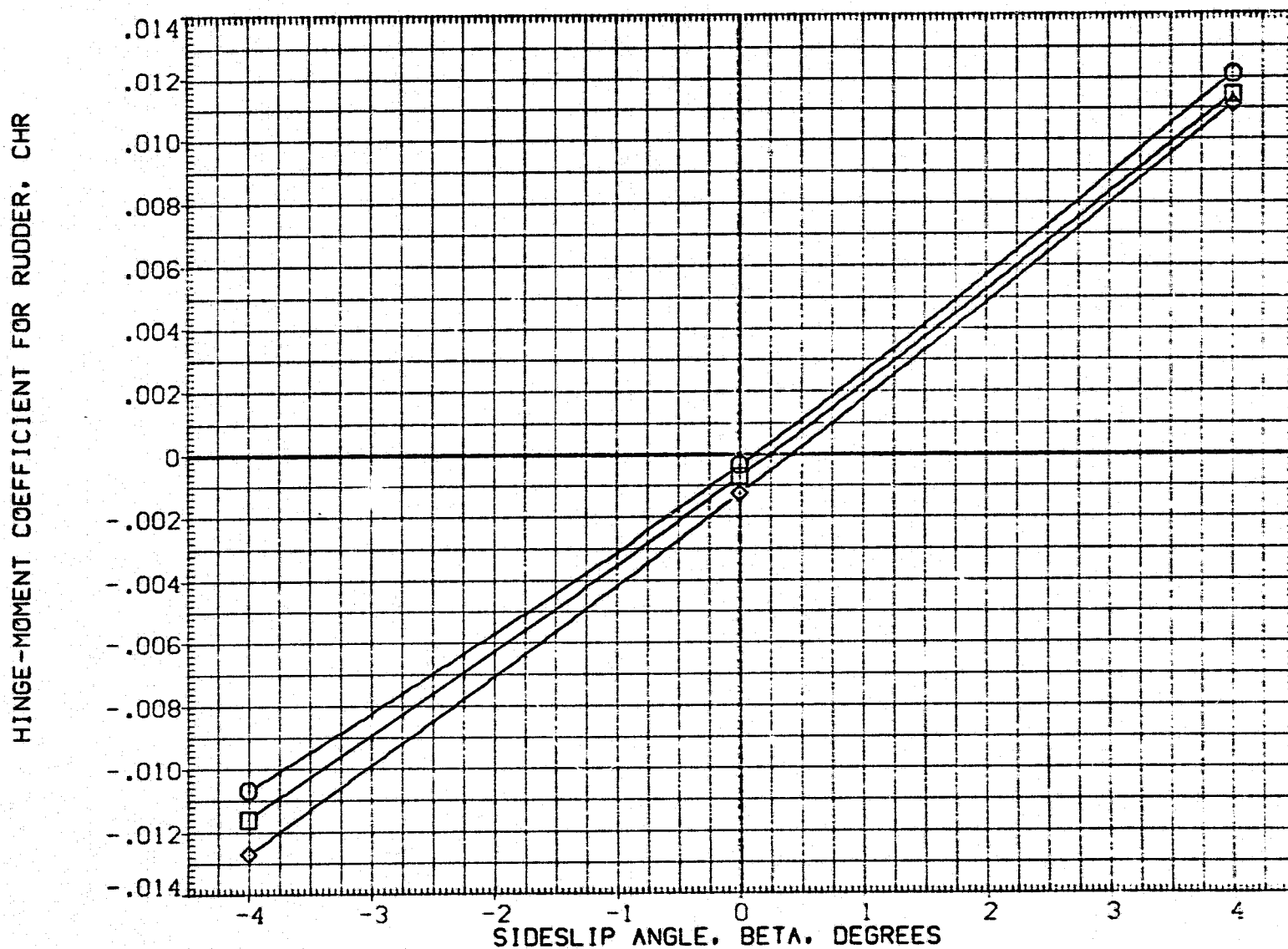


FIG. 107 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.6 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

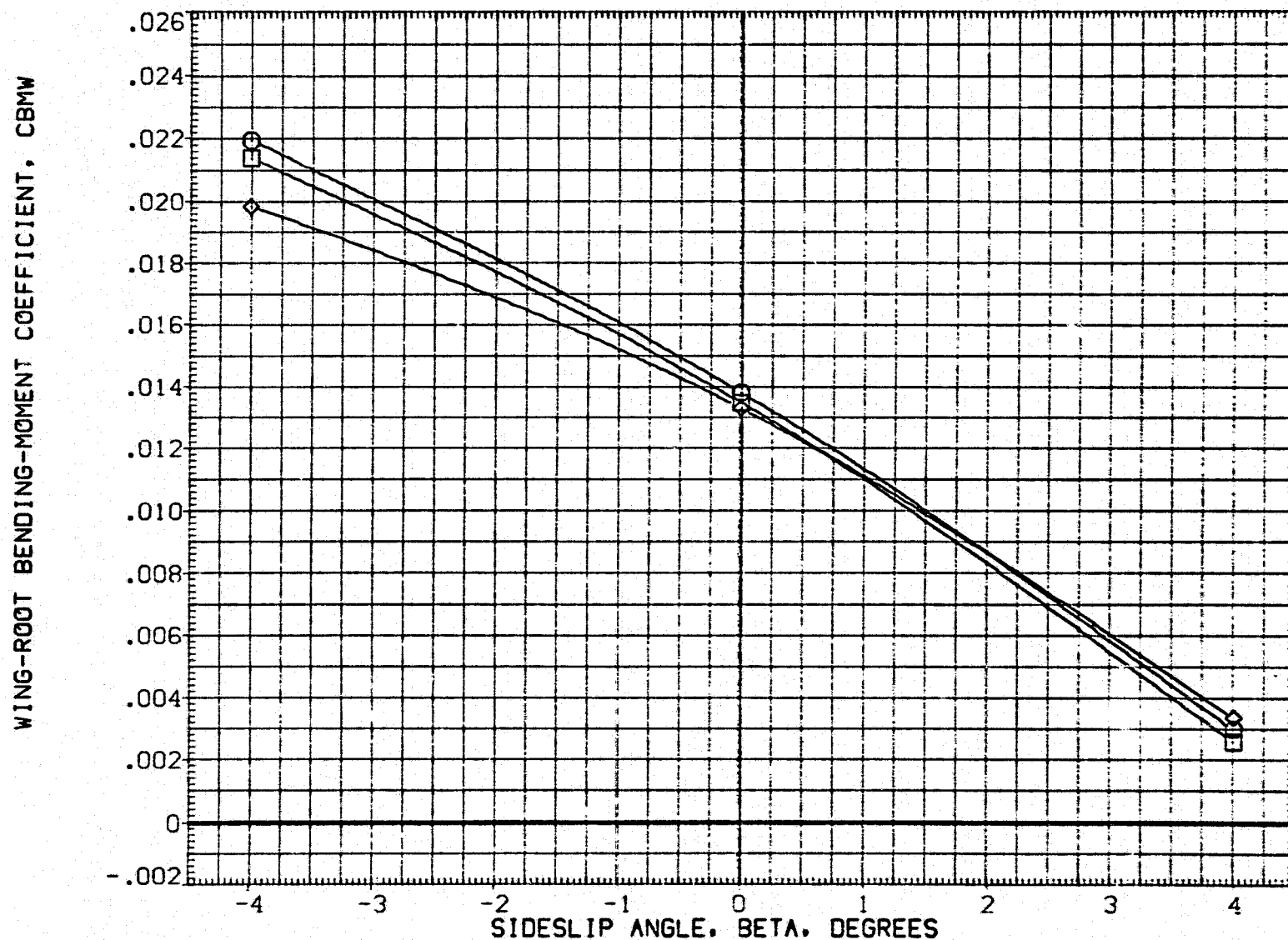


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

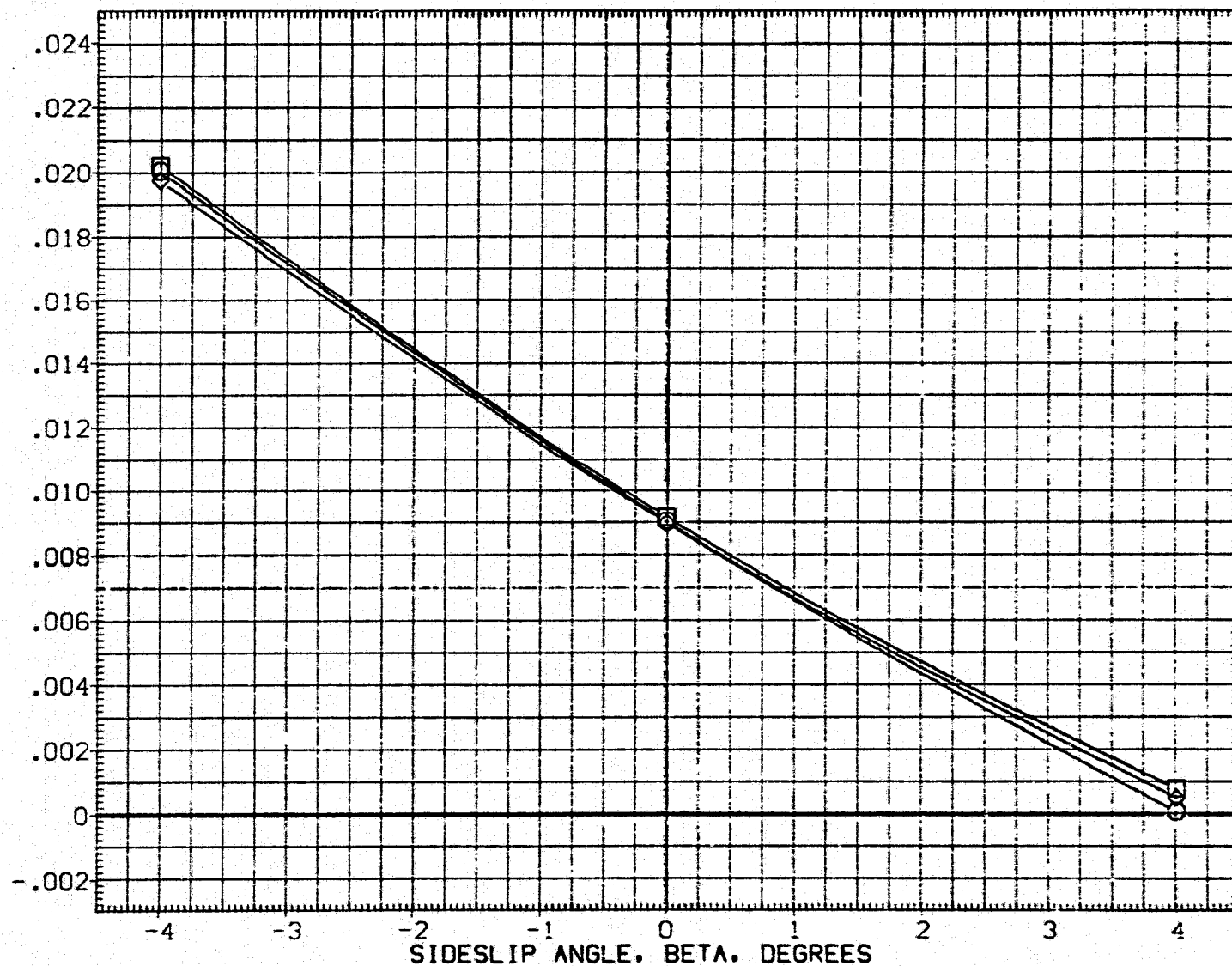


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

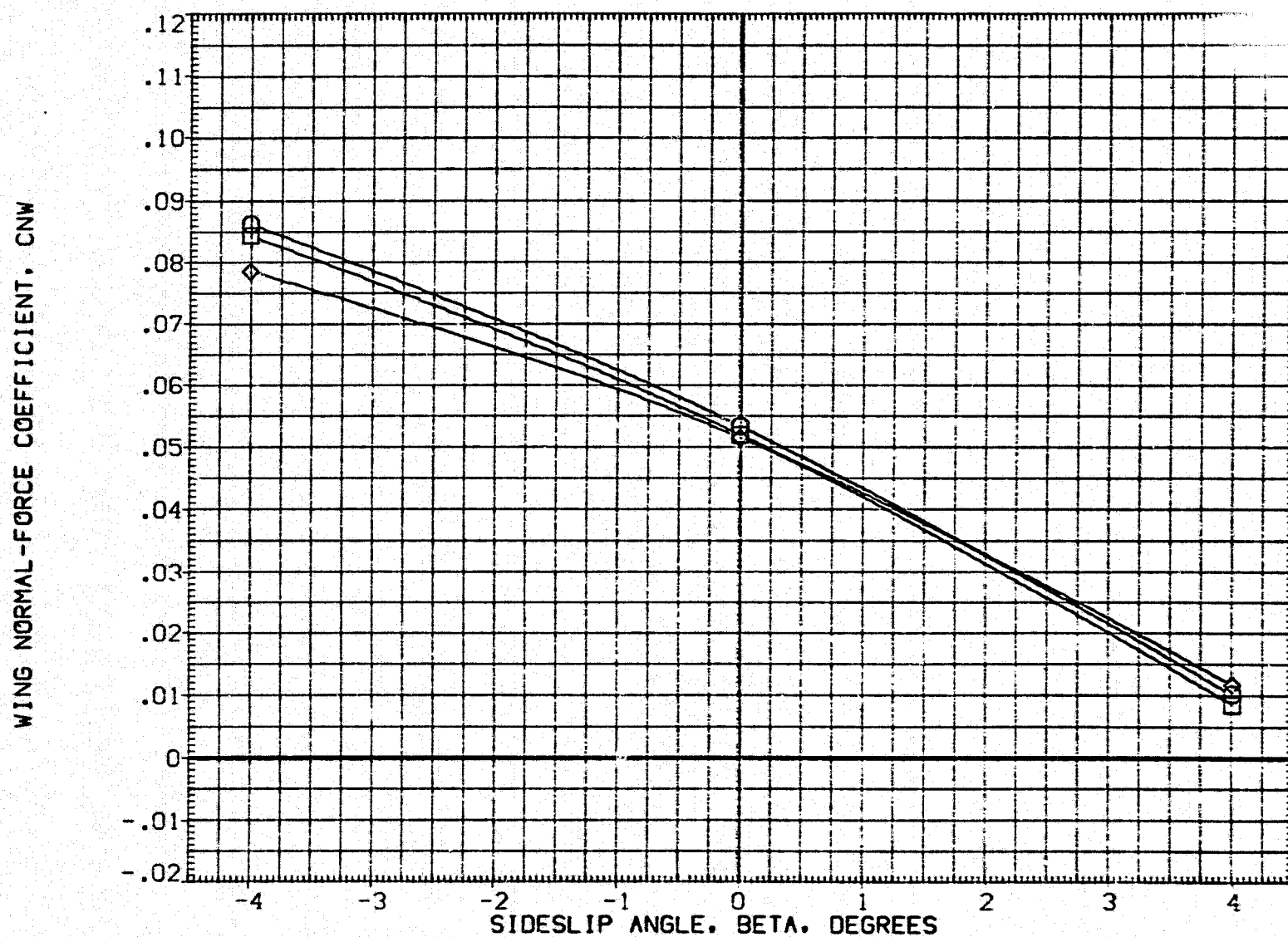


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SQ.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

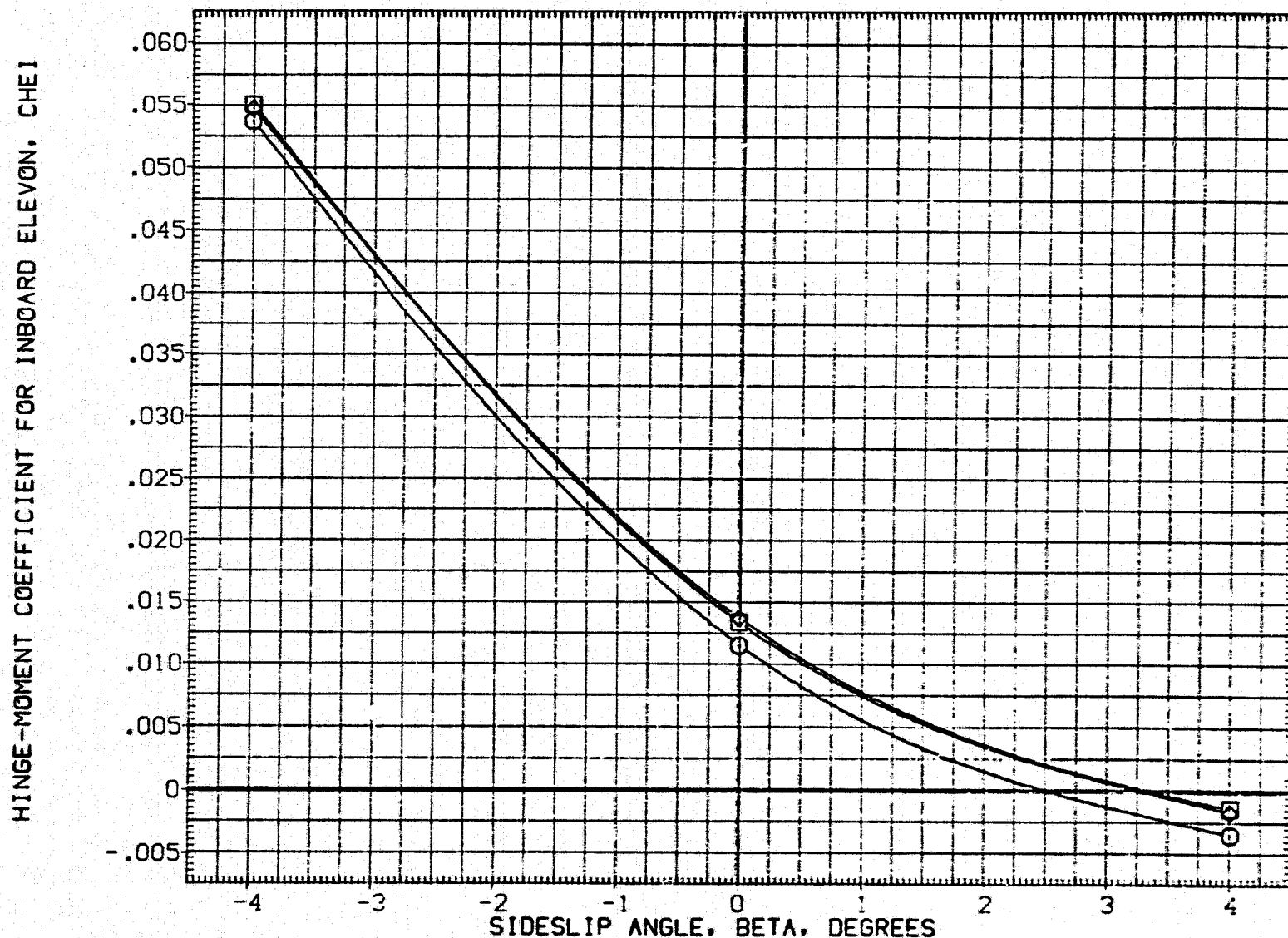


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0200

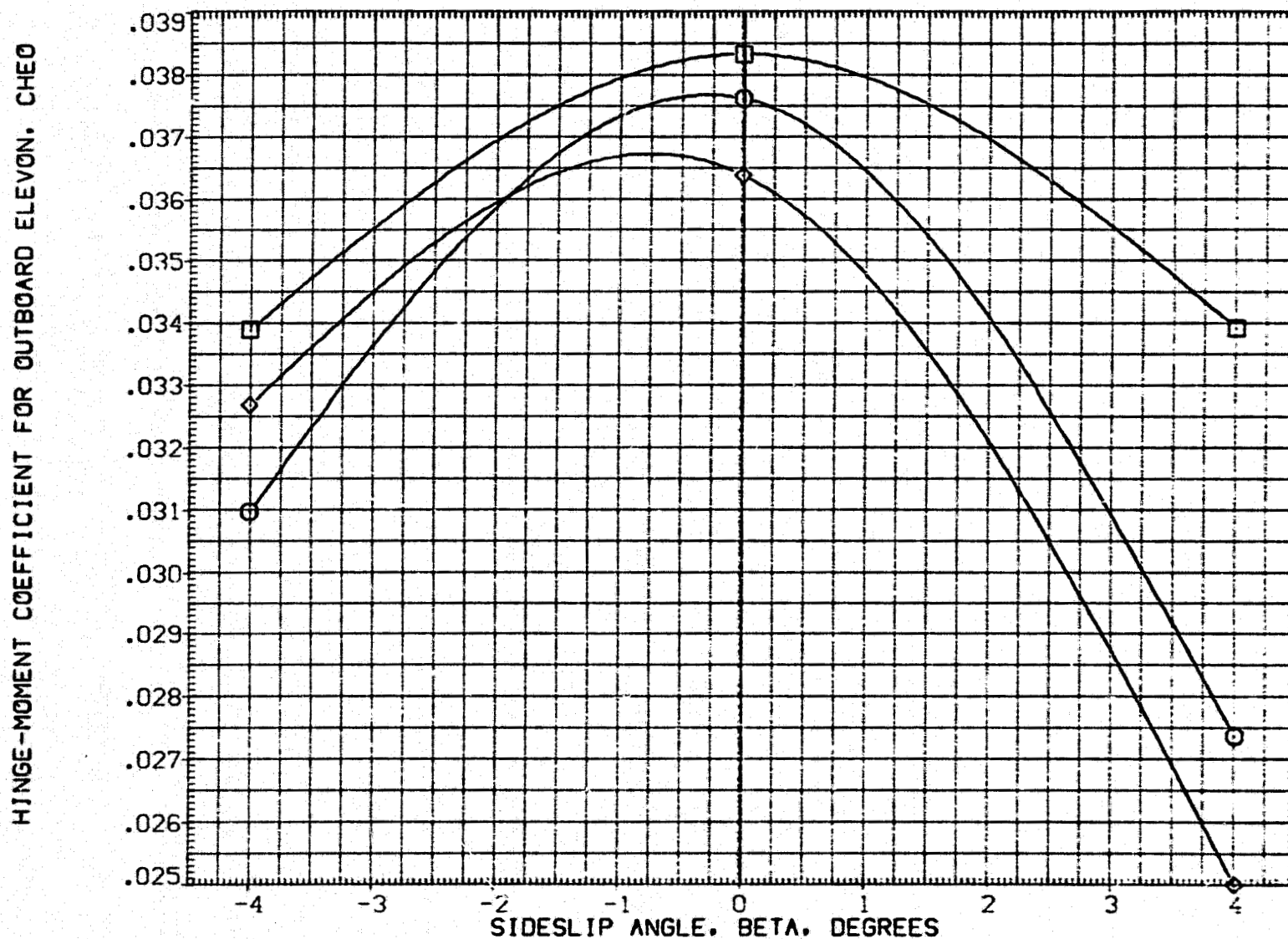


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF 2690.0000 SO.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF 1290.3000 IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

VERTICAL-TAIL BENDING-MOMENT COEFFICIENT, CBMV

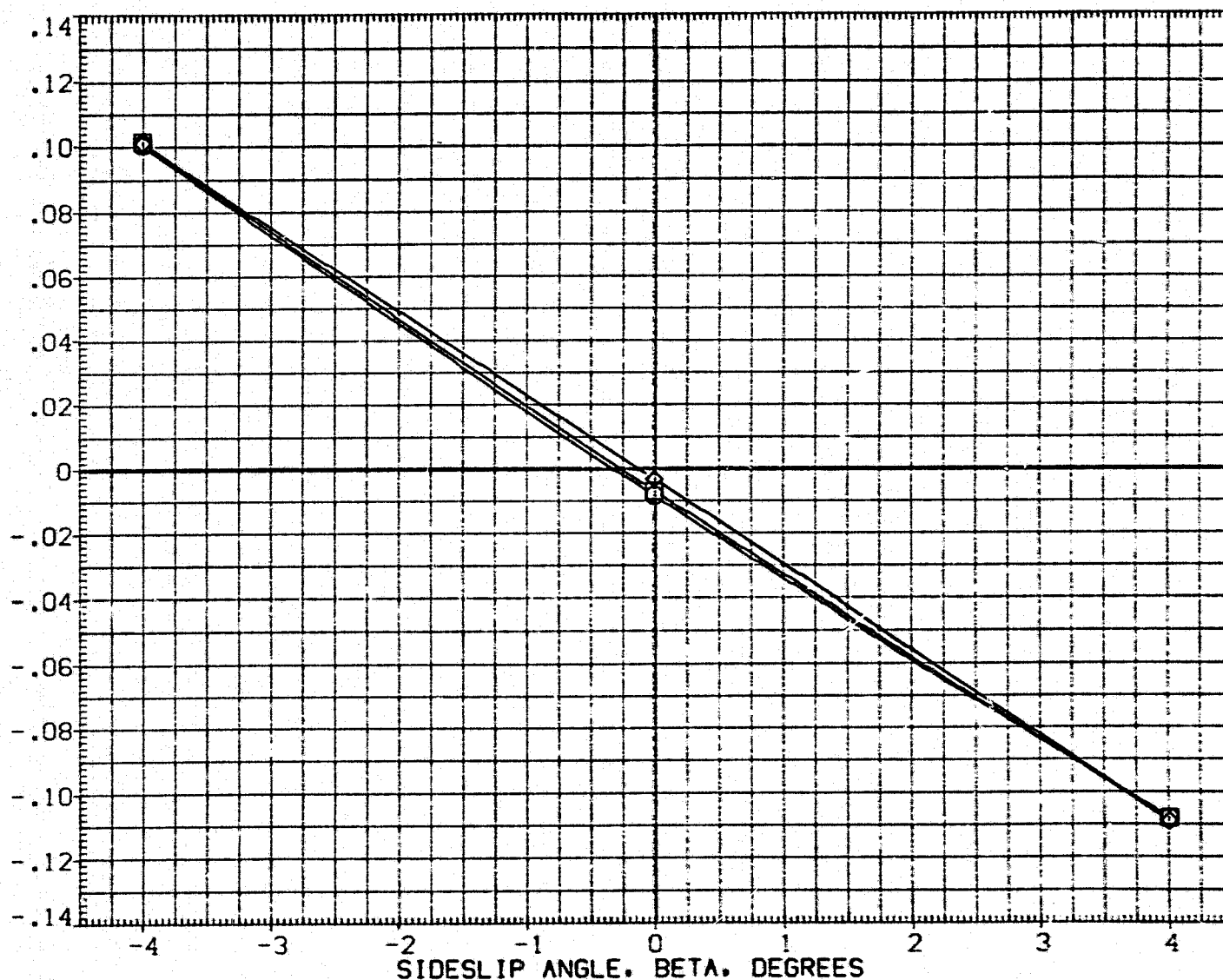


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000 SQ.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000 IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

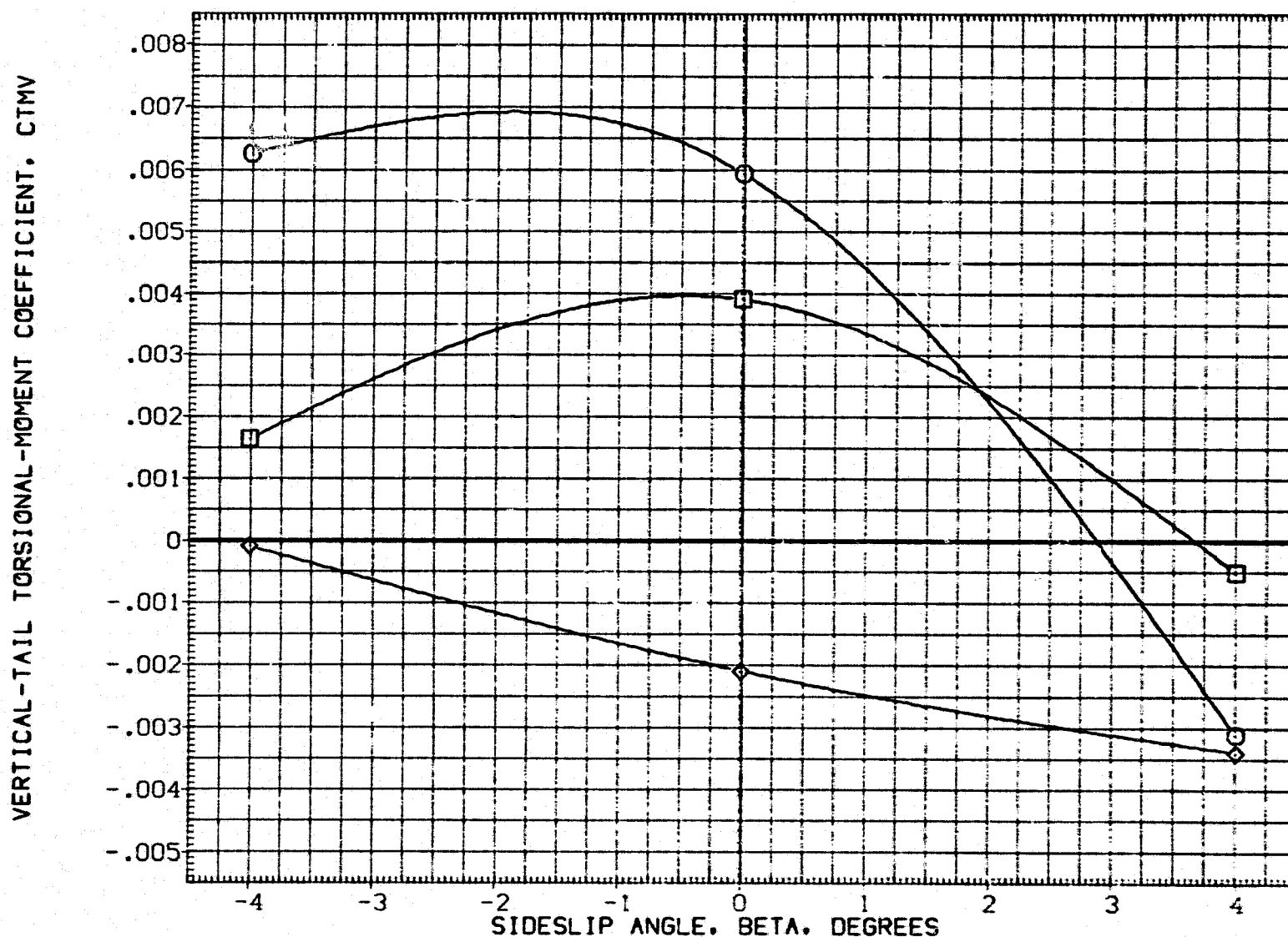


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-09	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SC.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

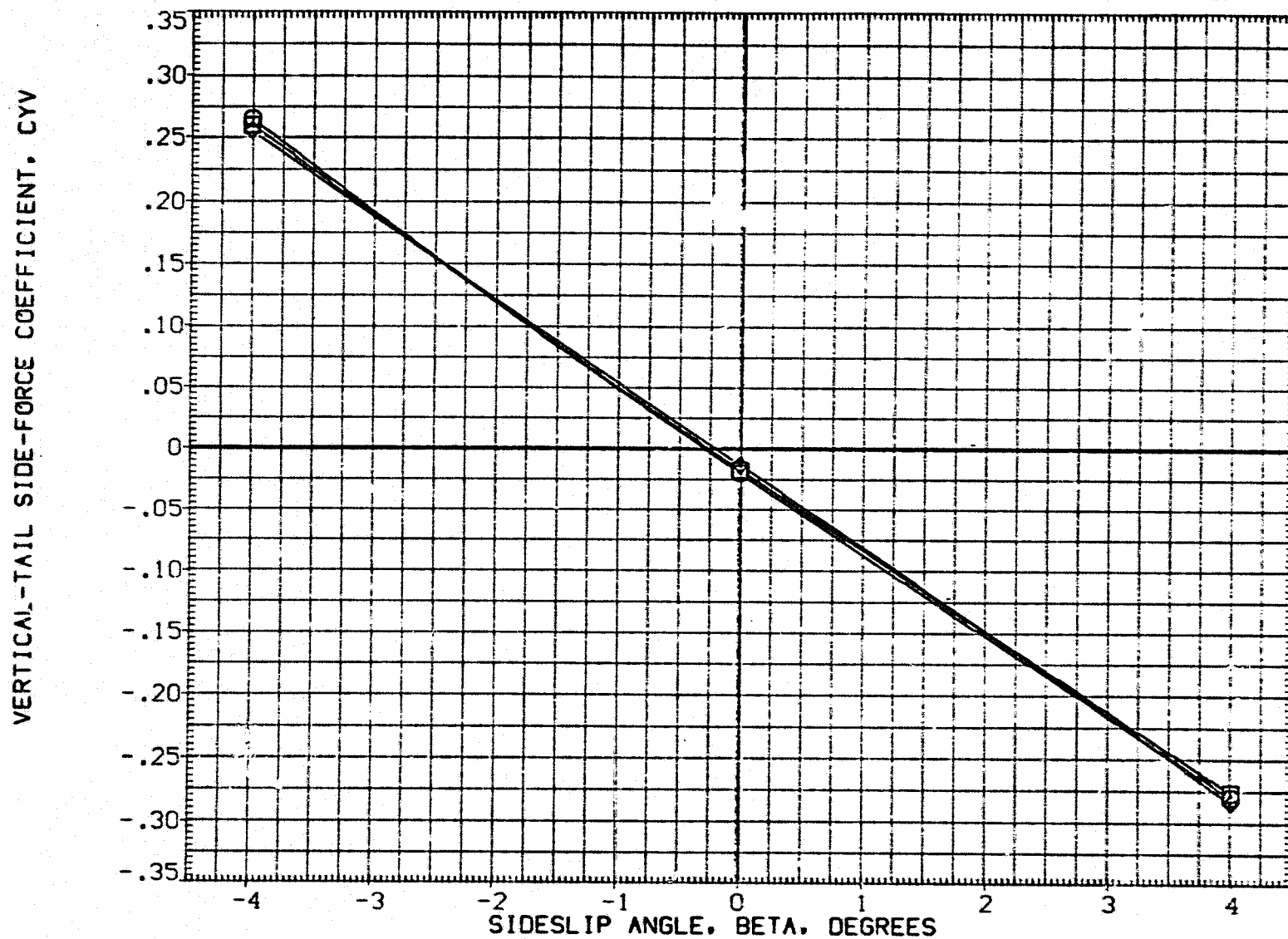


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-TB	ELV-DB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y21)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	4.250	SREF	2690.0000	SG.FT.
(RE4Y47)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	3.250	LREF	1290.3000	IN.
(RE4Y39)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.900	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

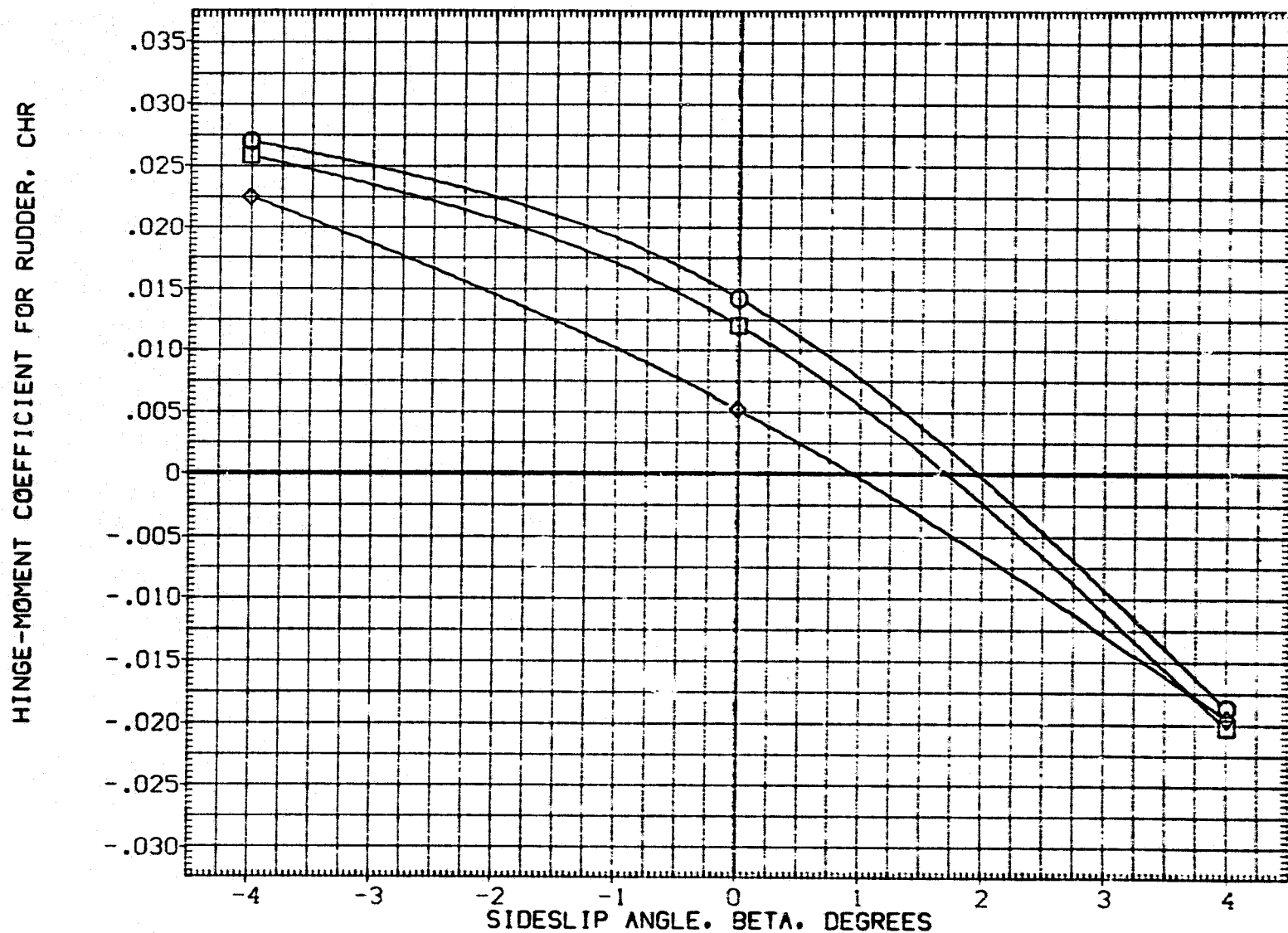


FIG. 108 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=0.9 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

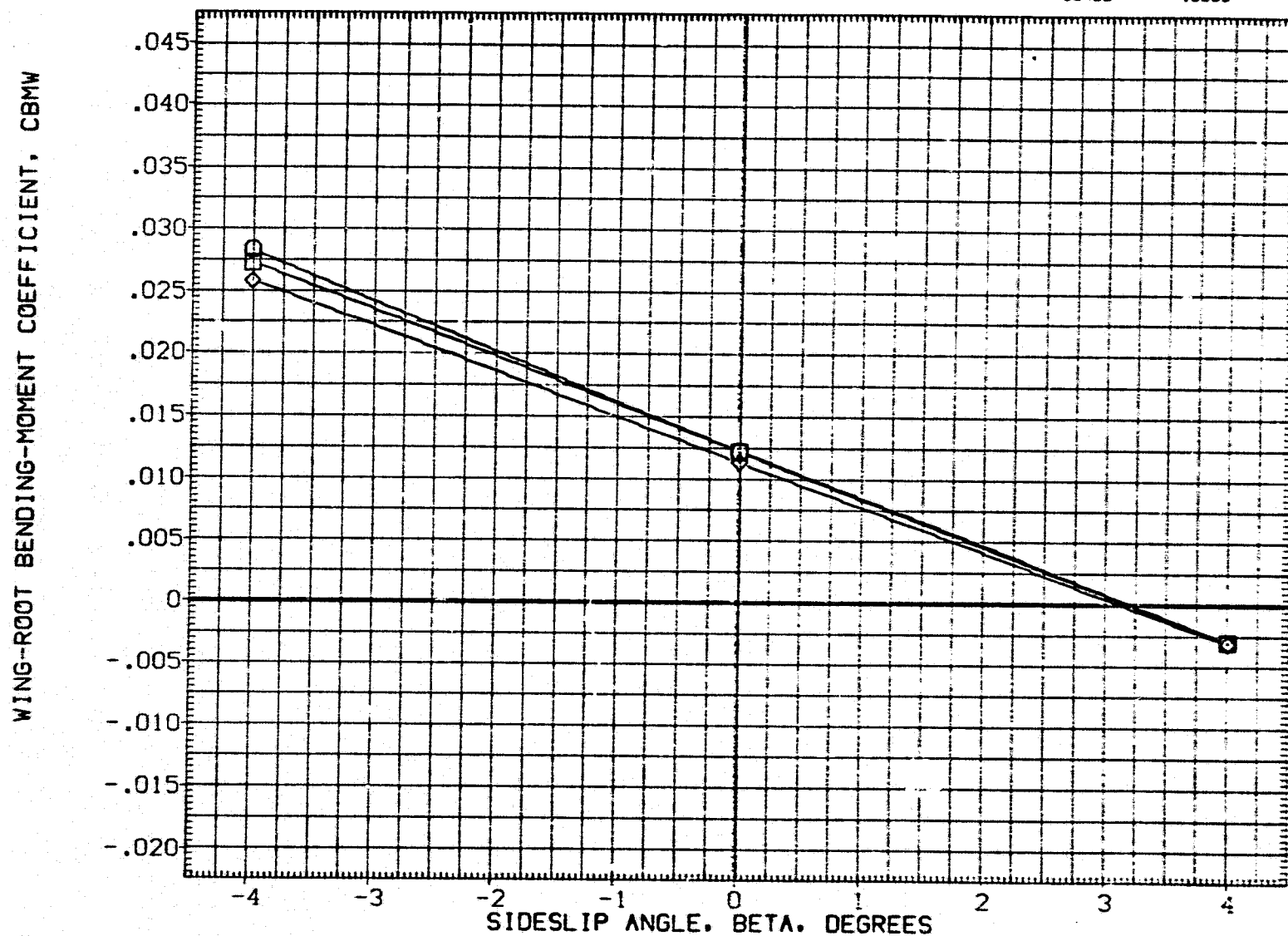


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

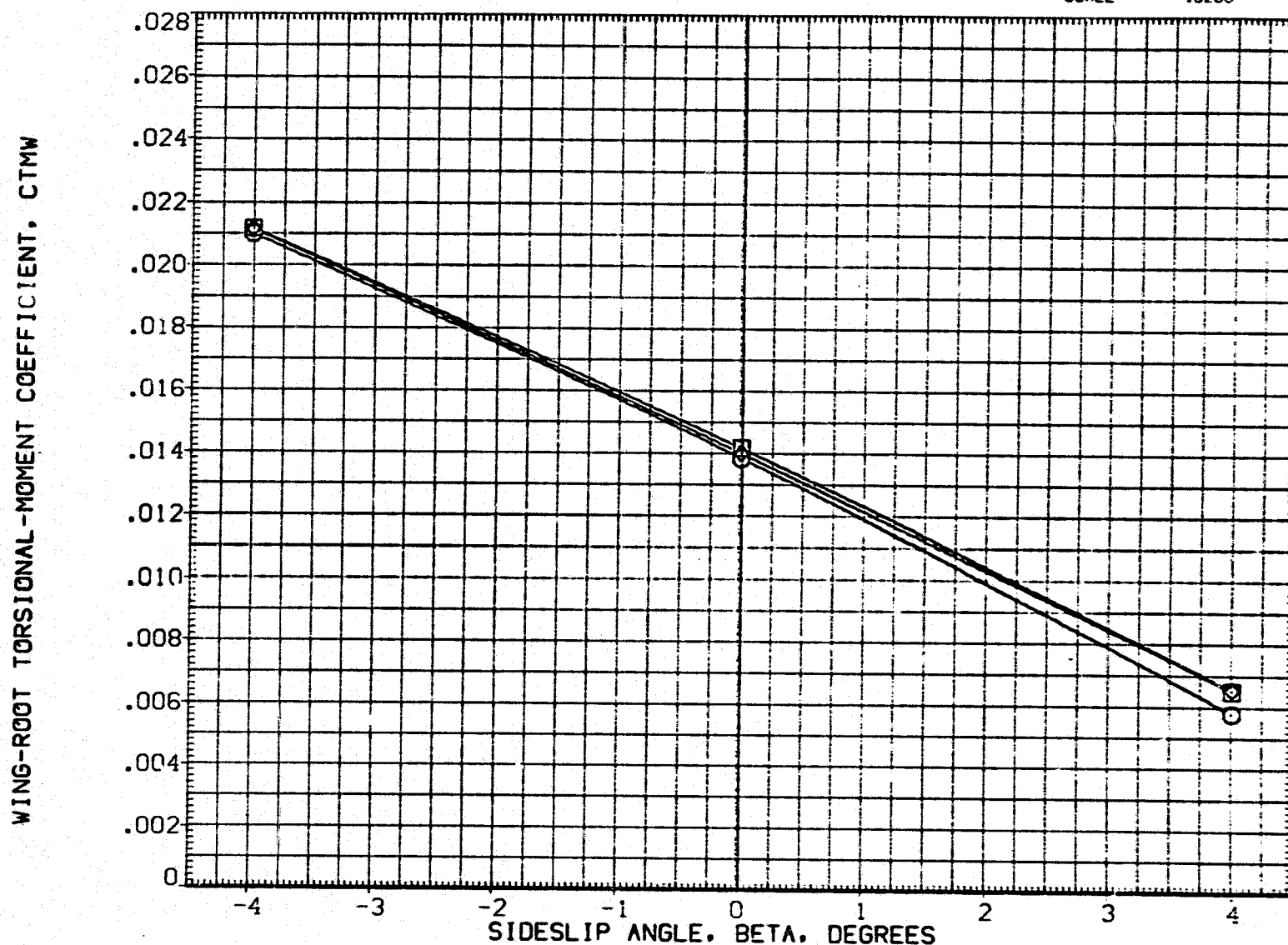


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRF	.0000	IN.
						YMRF	.0000	IN.
						ZMRF	.0000	IN.
						SCALE	.0200	

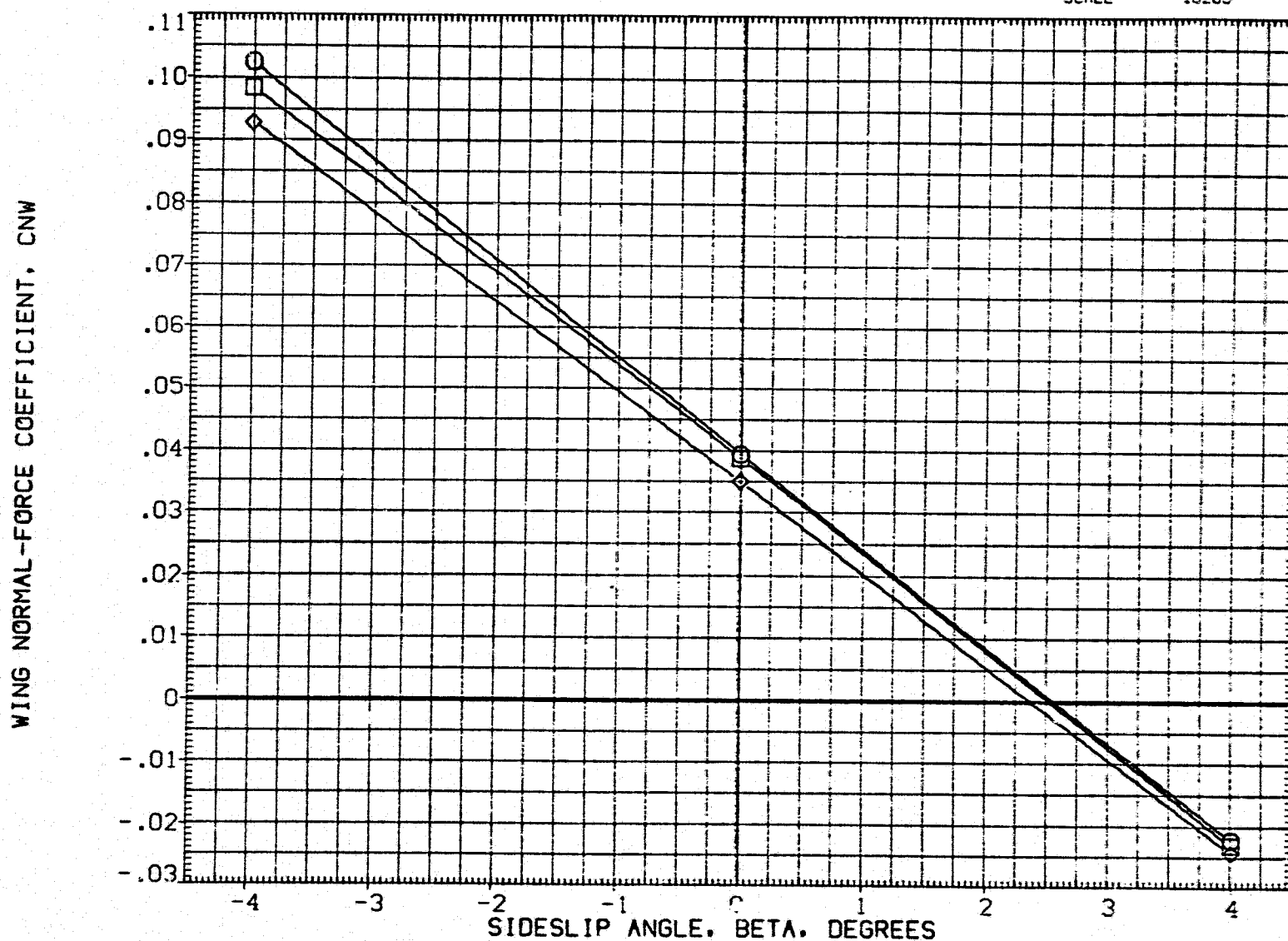


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-09	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

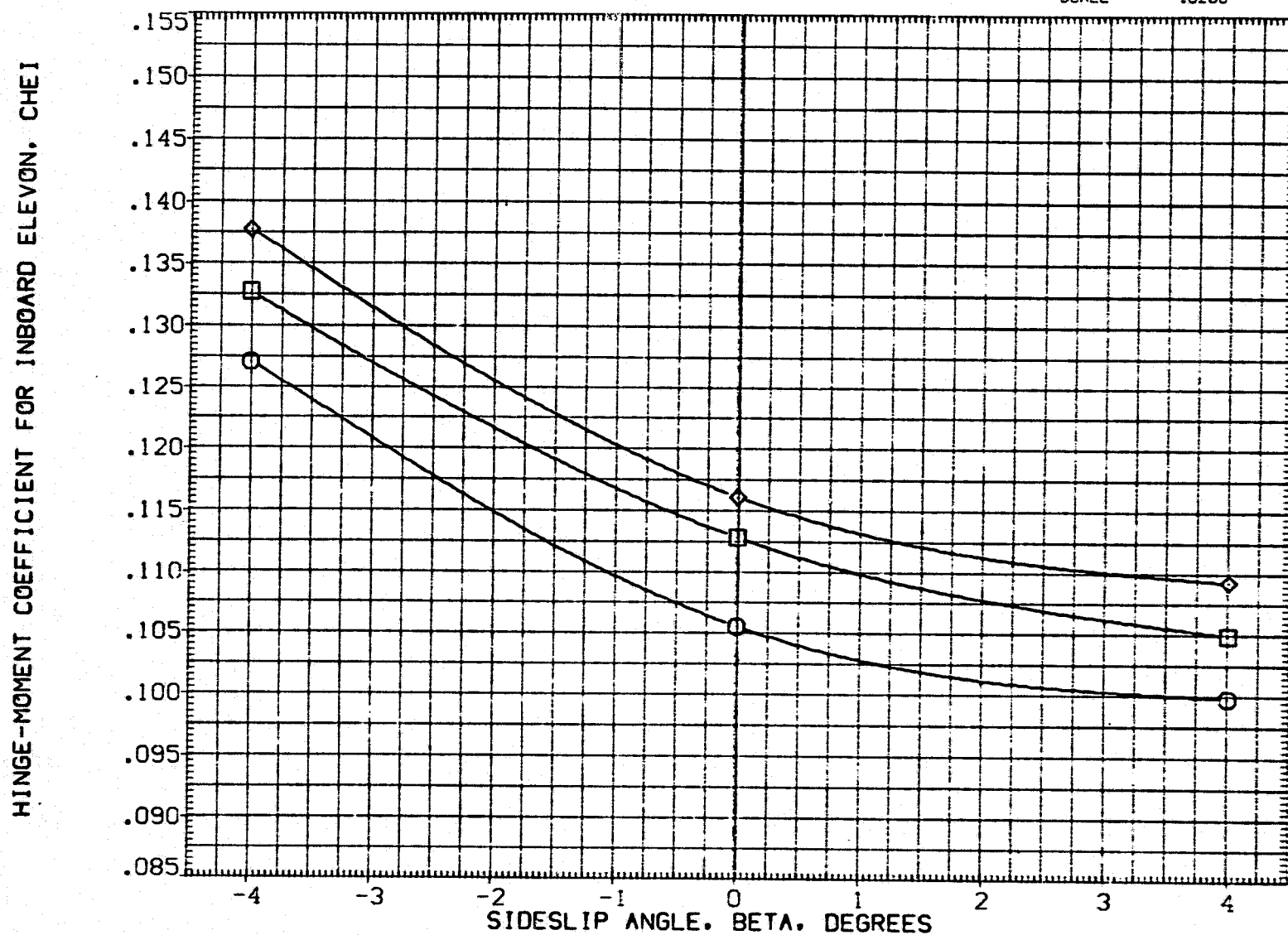


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

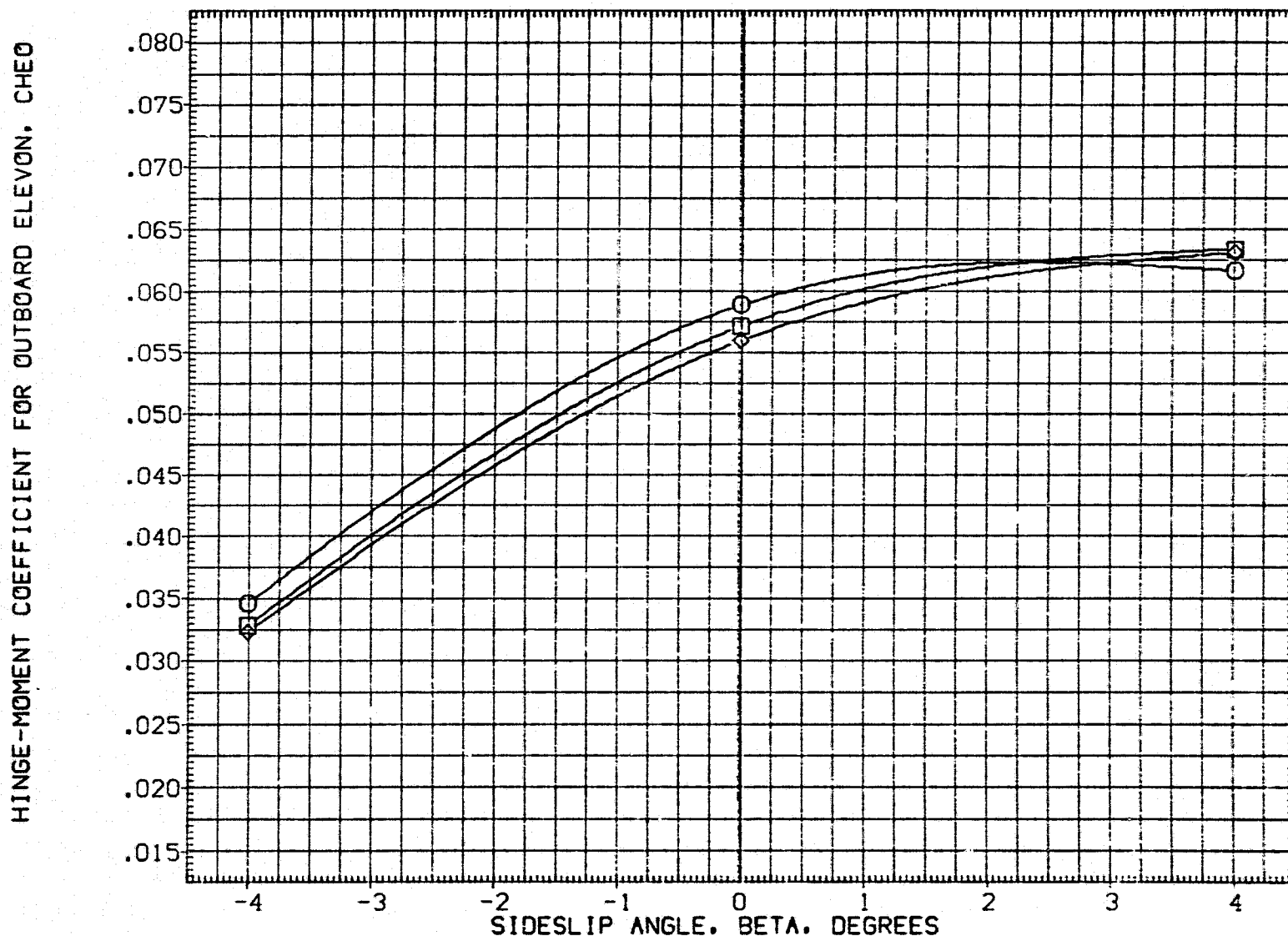


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	269.000	SG.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

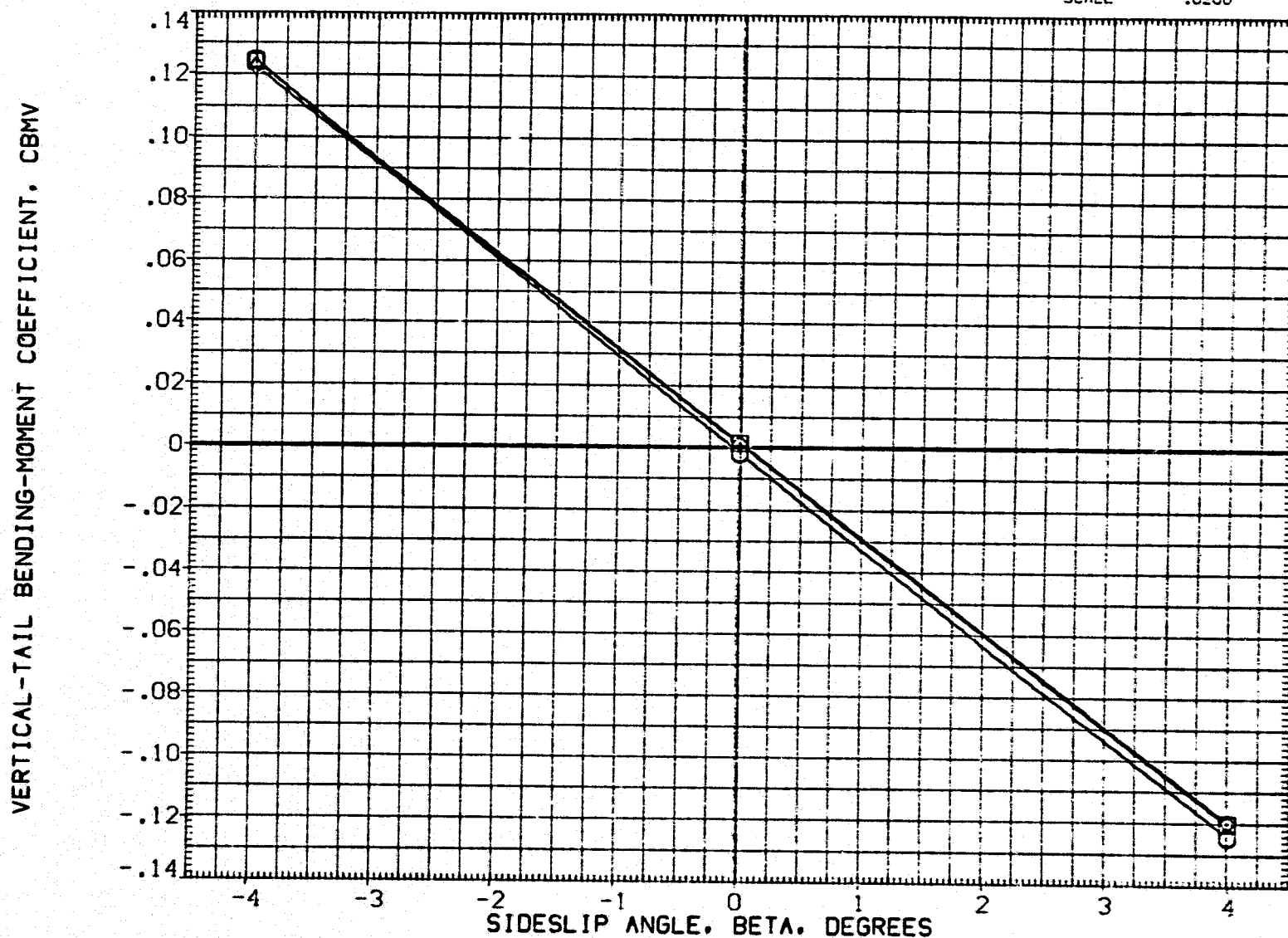


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW. MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-10	ELV-00	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	50.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

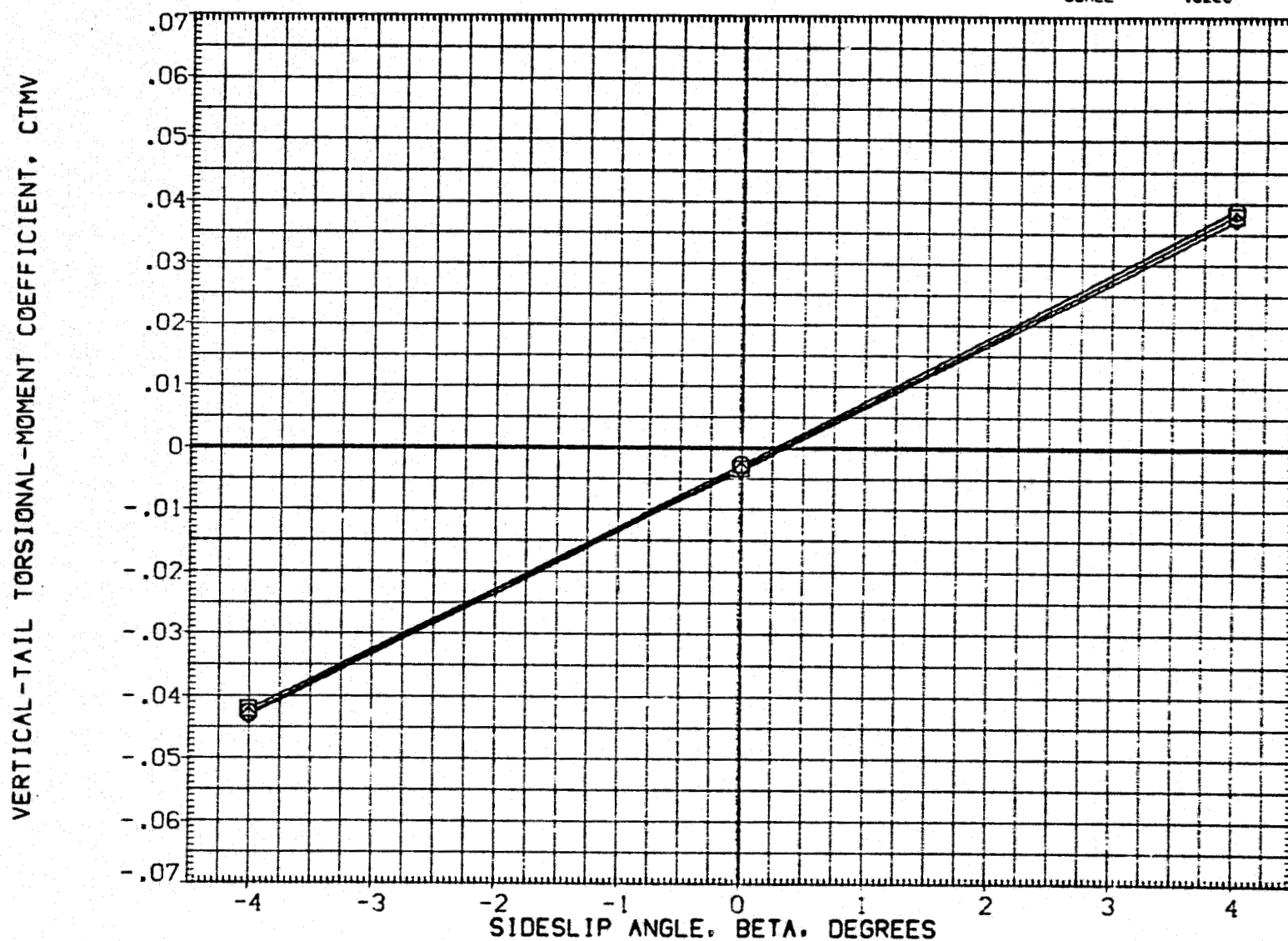


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	REFERENCE INFORMATION	
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000 SQ.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000 IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

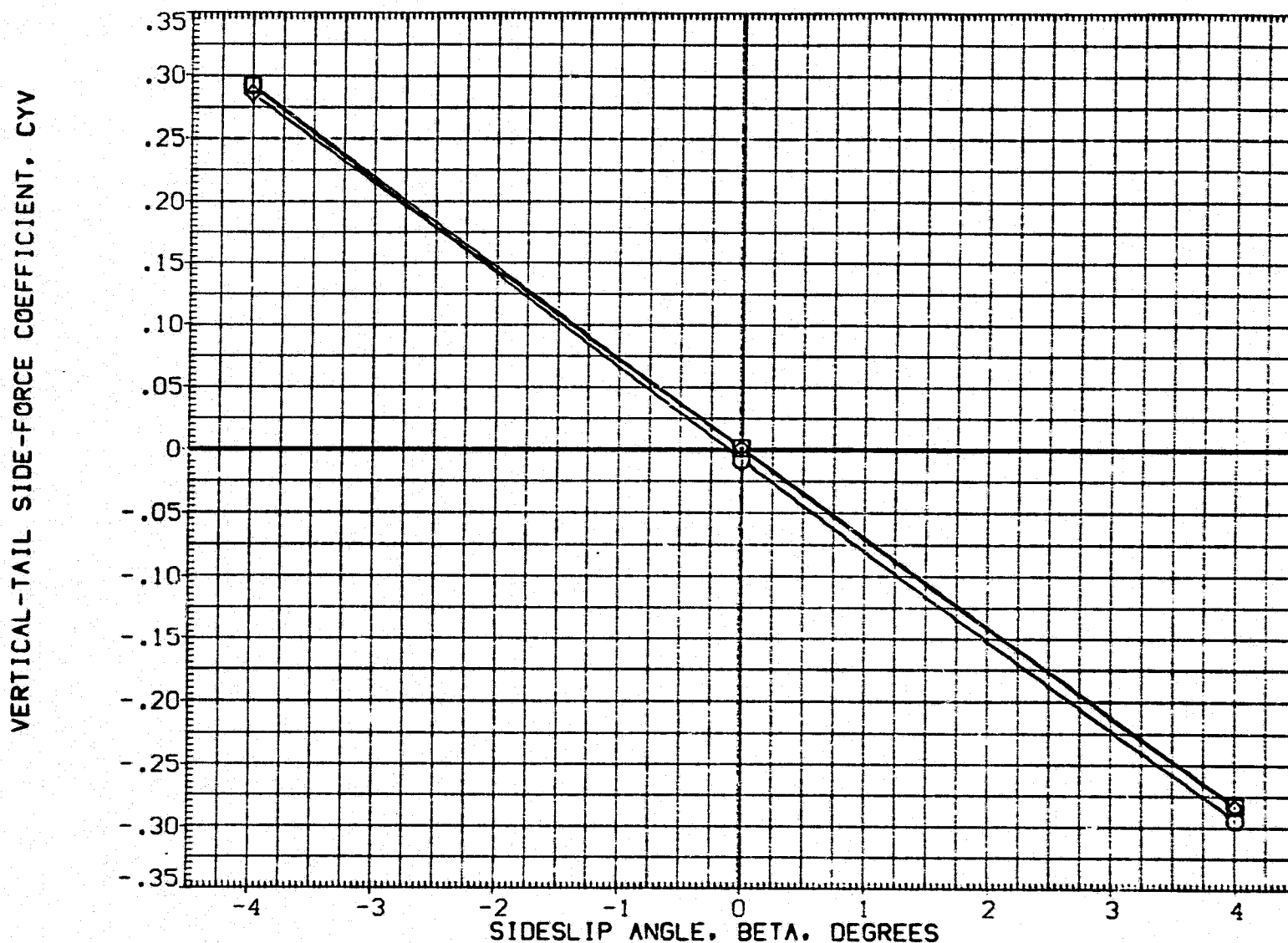


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L	REFERENCE INFORMATION		
(RE4Y22)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	4.250	SREF	2690.0000	SQ.FT.
(RE4Y48)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	3.250	LREF	1290.3000	IN.
(RE4Y40)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	1.100	2.250	BREF	1290.3000	IN.
						XMRP	.0000	IN.
						YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

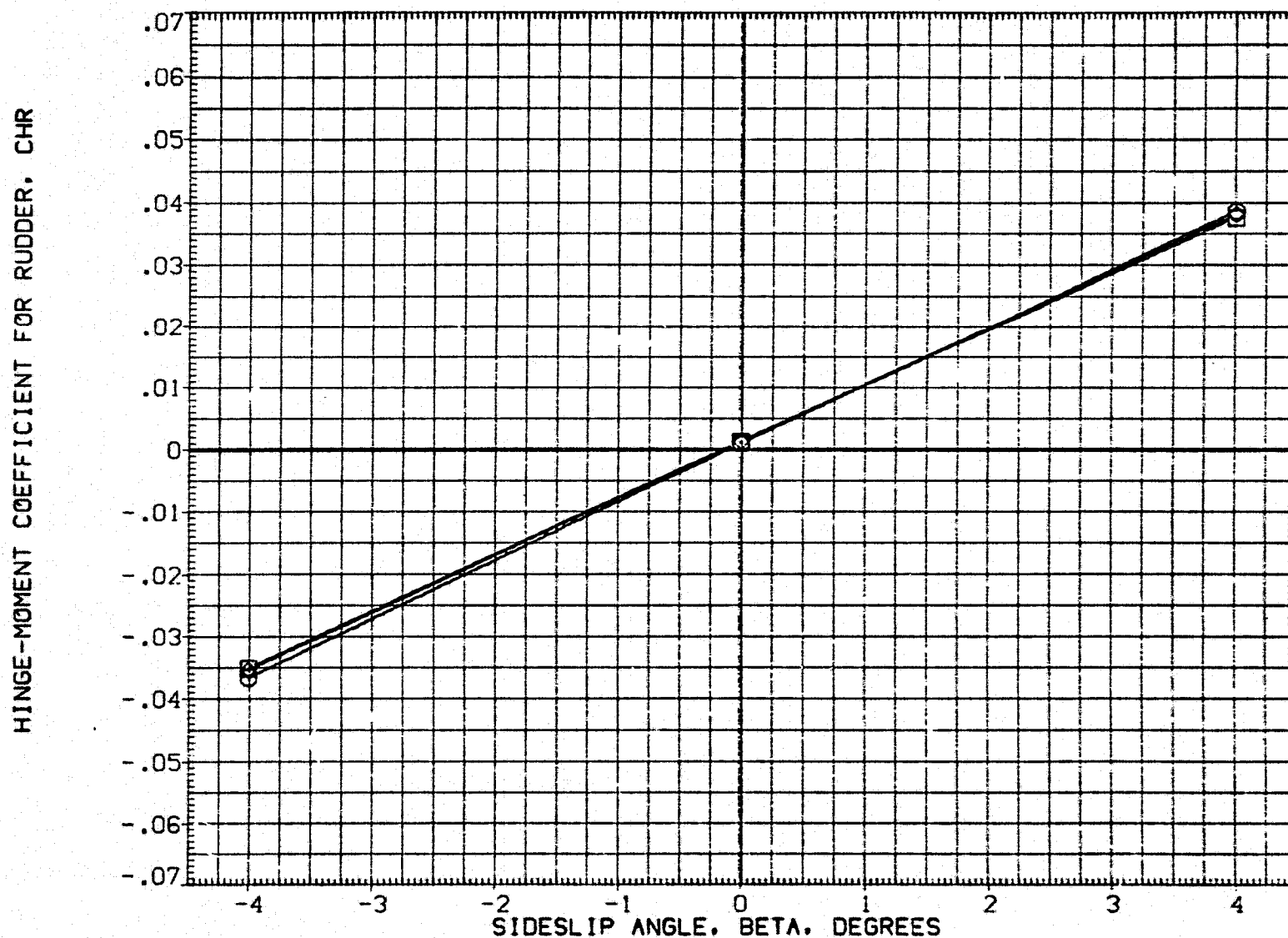


FIG. 109 EFFECT OF REYNOLDS NUMBER IN YAW, MACH=1.1 PLUMES ON
(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(RE4N25)	ARC 11-023 1A80 0TS (SRB NOM-) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N06)	ARC 11-023 1A80 0TS (SRB NOM+) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N01)	ARC 11-023 1A80 0TS (SRB NOM++) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

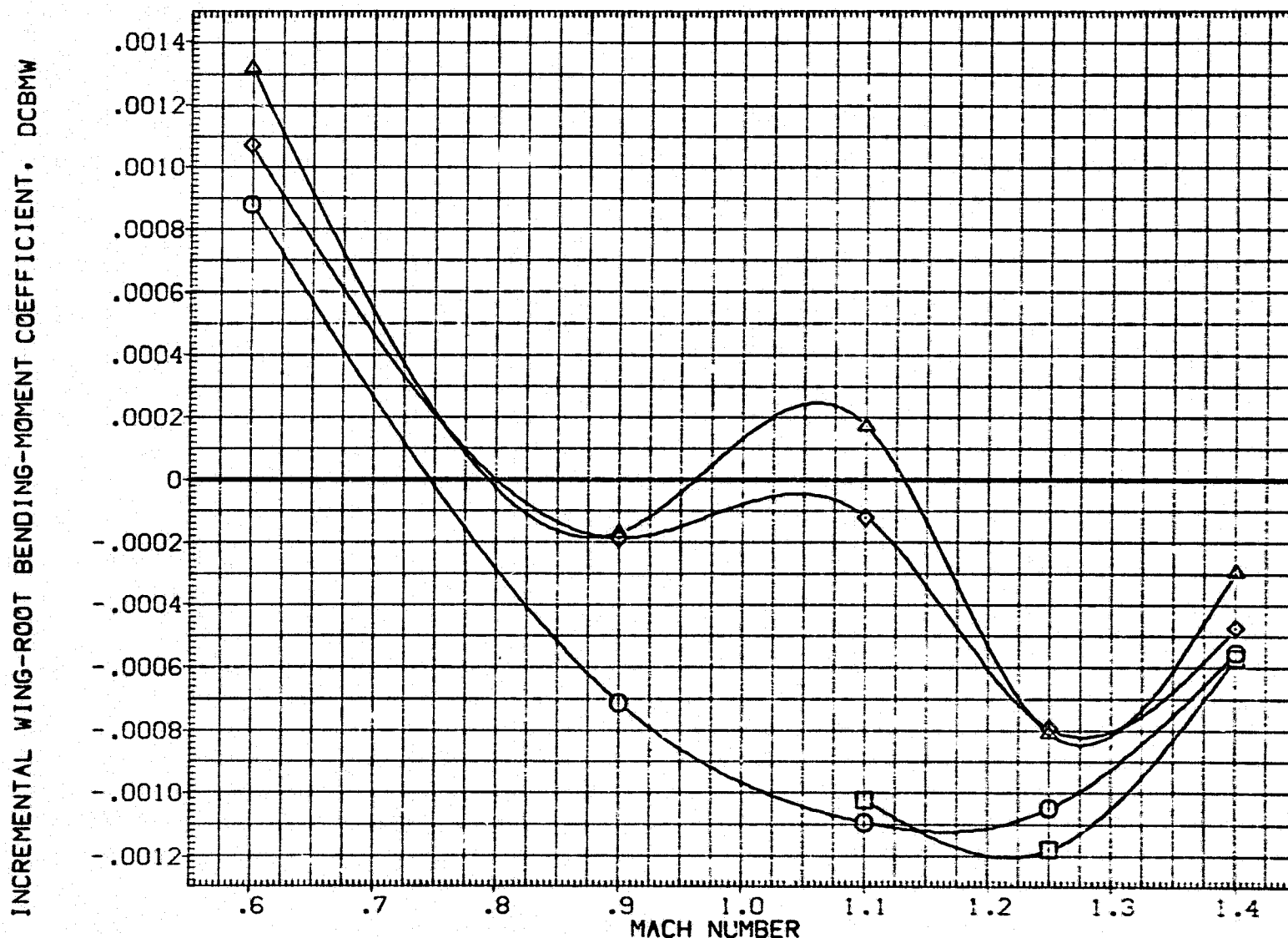


FIG. 110 SUMMARY, SRB PLUME SIZE EFFECTS ON WING LOADS

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-03	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SC.FT.
(RE4N25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

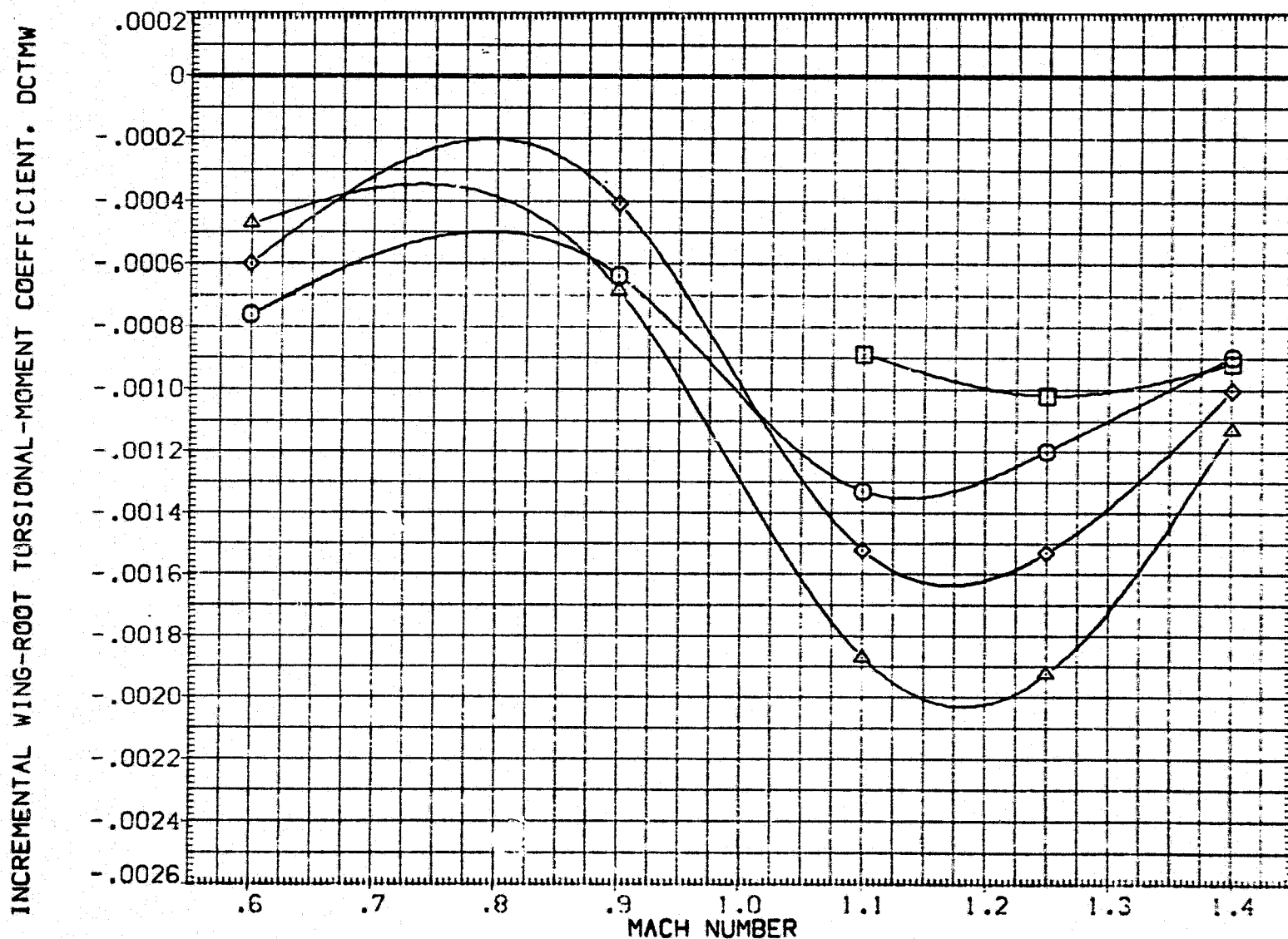


FIG. 110 SUMMARY, SRB PLUME SIZE EFFECTS ON WING LOADS

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4N20)	ARC 11-023 1AB0 OTS (SRB NOM) (SSME NOM)
(RE4N25)	ARC 11-023 1AB0 OTS (SRB NOM-) (SSME NOM)
(RE4N06)	ARC 11-023 1AB0 OTS (SRB NOM+) (SSME NOM)
(RE4N01)	ARC 11-023 1AB0 OTS (SRB NOM**) (SSME NOM)

ELV-18	ELV-08	ALPHA
.000	.000	.000
.000	.000	.000
.000	.000	.000
.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

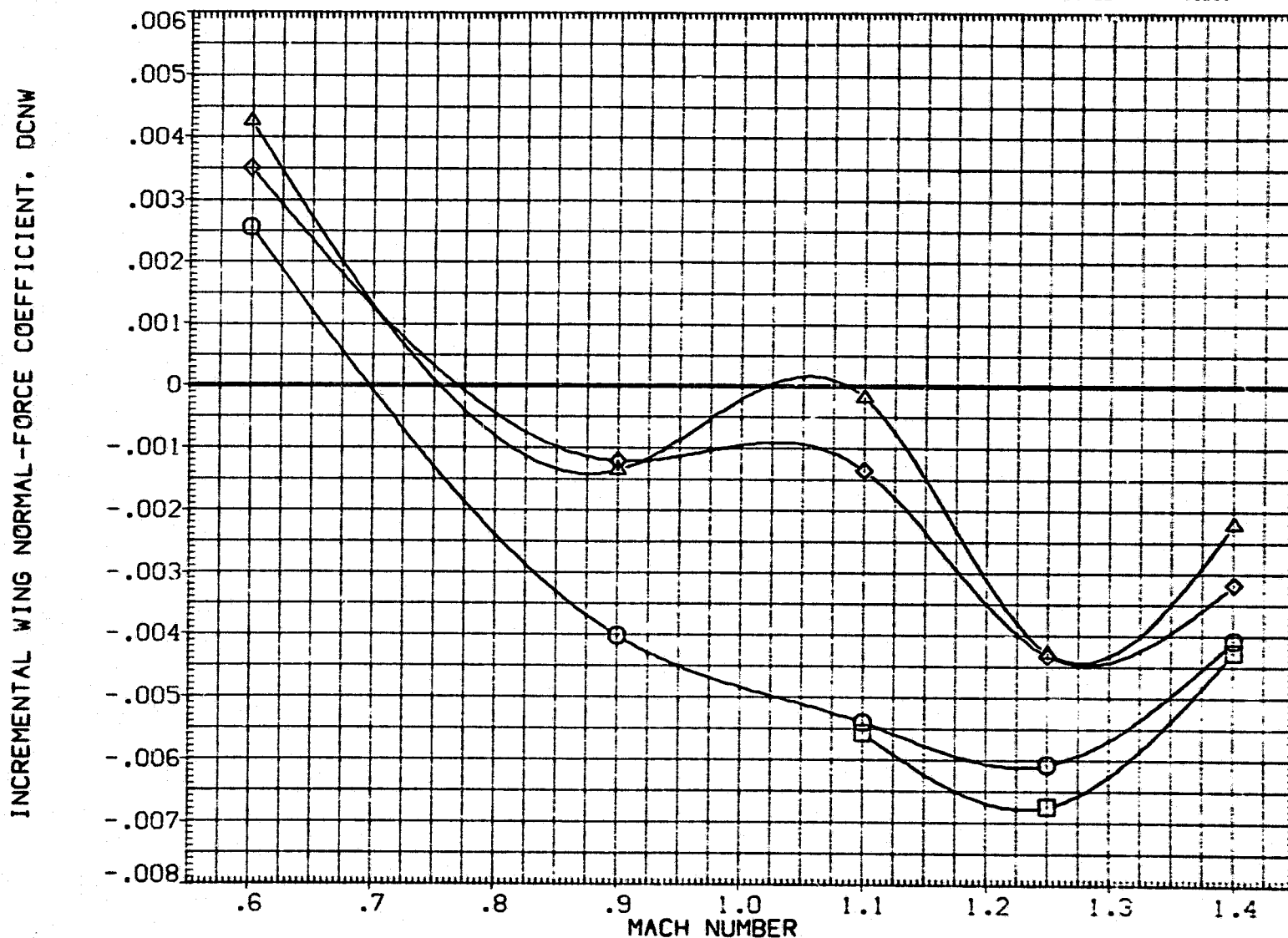


FIG. 110 SUMMARY, SRB PLUME SIZE EFFECTS ON WING LOADS

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(RE4N25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON. DCHEI

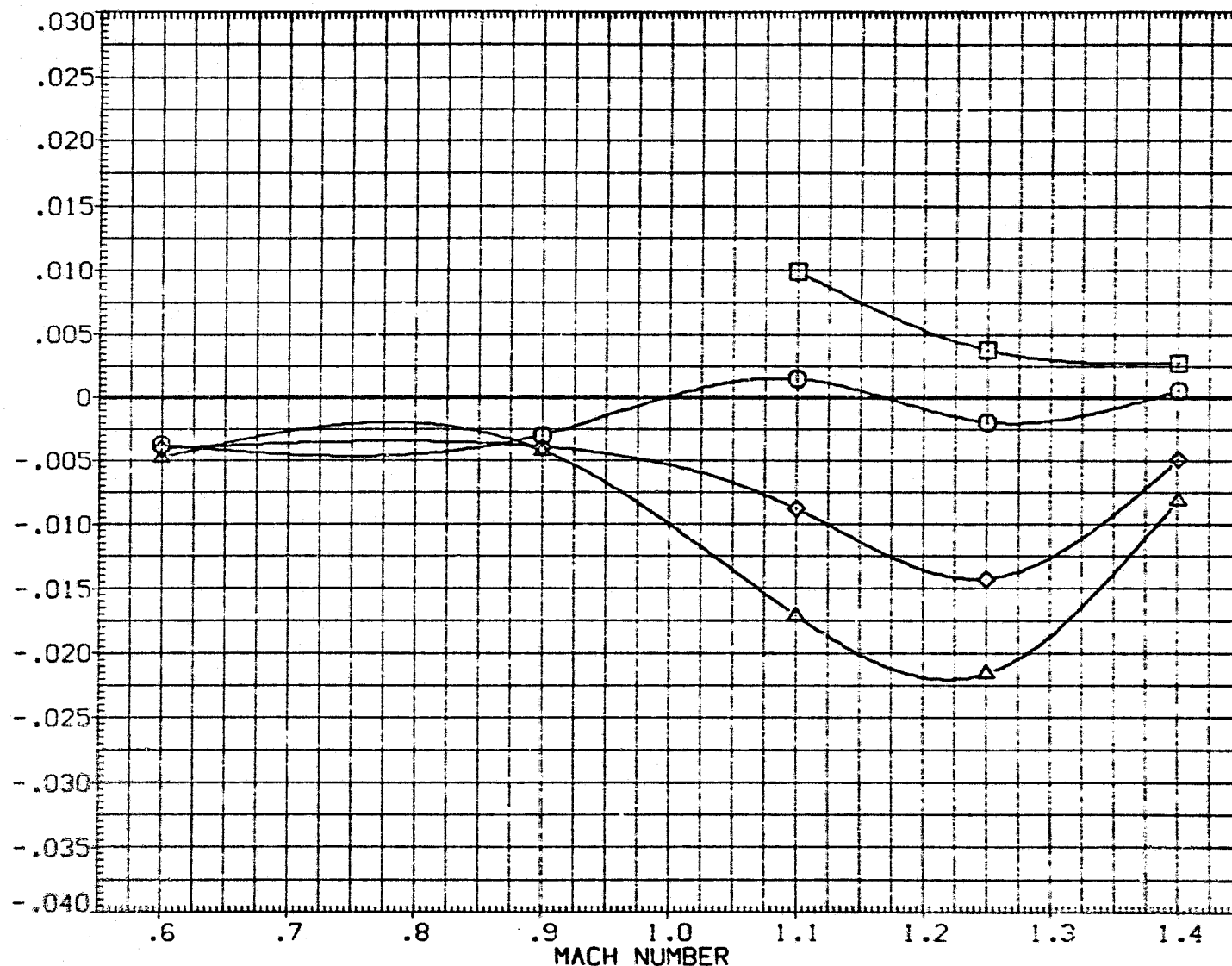


FIG. 111 SUMMARY, SRB PLUME SIZE EFFECTS ON ELEVON HINGE MOMENTS

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-19	ELV-08	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SO. FT.
(RE4N25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. DCHEQ

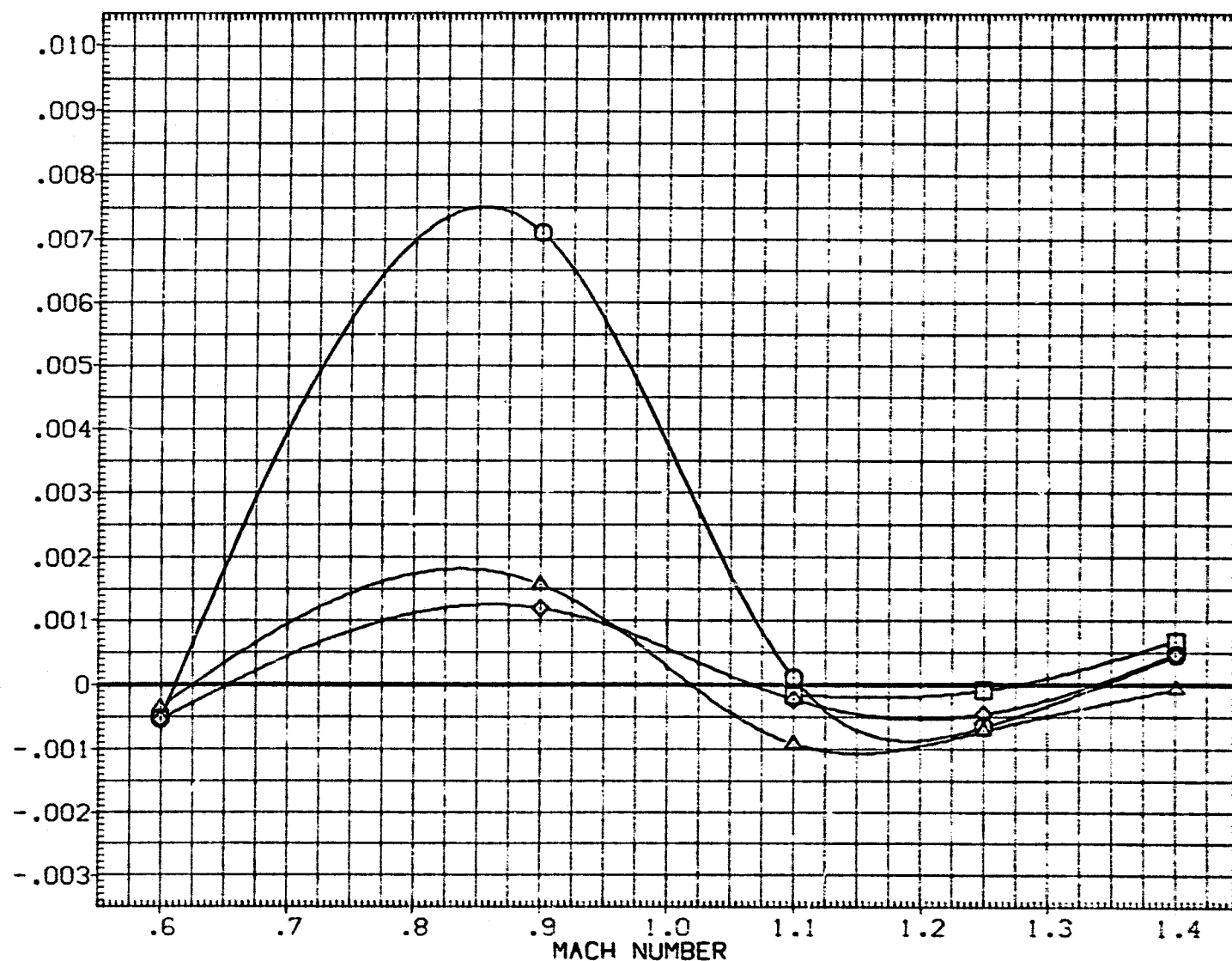


FIG. 111 SUMMARY, SRB PLUME SIZE EFFECTS ON ELEVON HINGE MOMENTS

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVID	DELVOB	ALPHA	REFERENCE INFORMATION		
DCBWE							
(RE4NA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.000	SREF	2690.0000	SQ.FT.
(RE4N90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.000	LREF	1290.3000	IN.
(RE4N74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.000	BREF	1290.3000	IN.
(RE4N84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.000	XMRP	.0000	IN.
(RE4N53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	YMRP	.0000	IN.
(RE4N64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL WING-ROOT BENDING-MOMENT COEFF. DUE TO ELEVON.

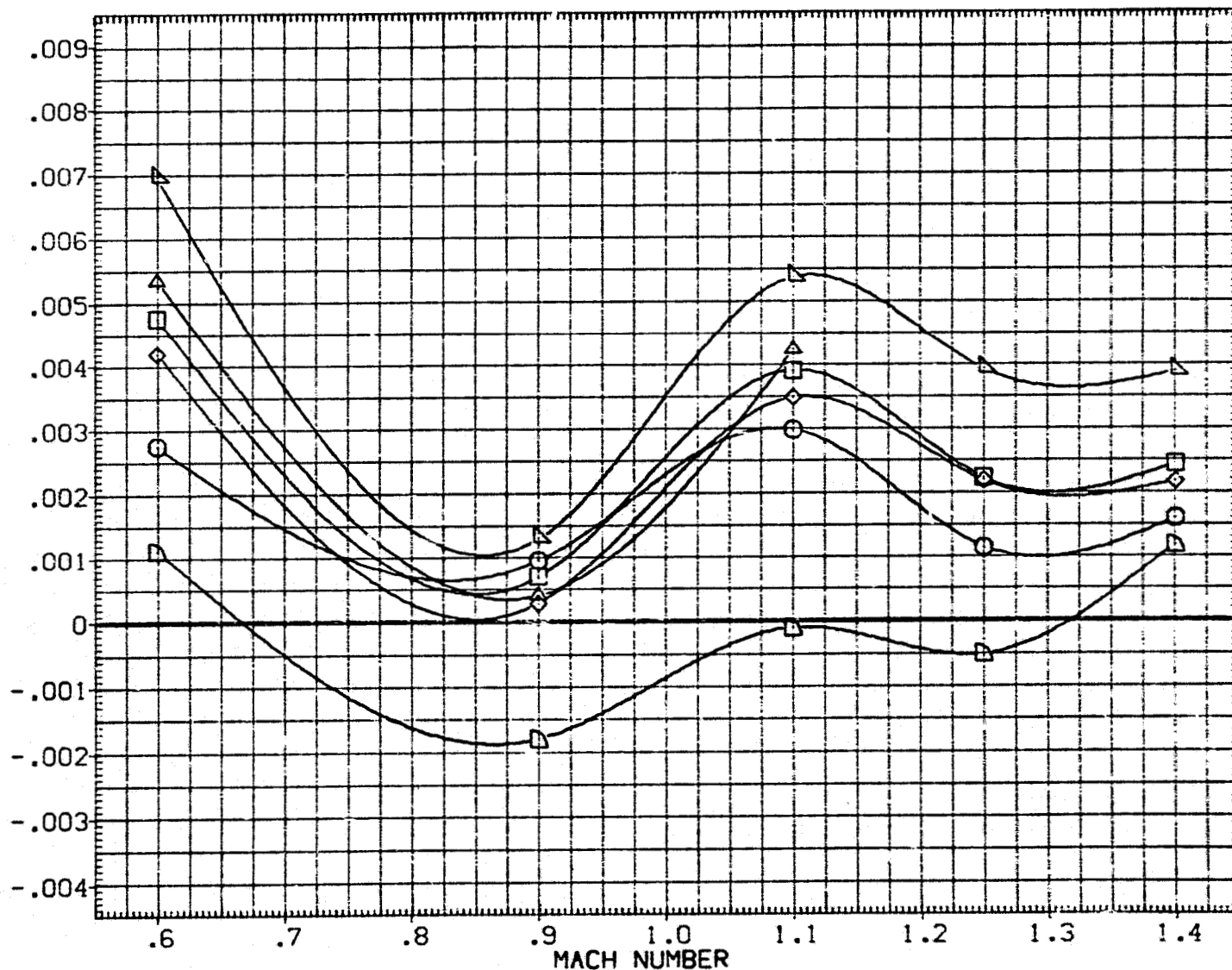


FIG. 112 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVIB	DELVOB	ALPHA	REFERENCE INFORMATION
(RE4NA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.000	SREF 2690.0000 SQ.FT.
(RE4N90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.000	LREF 1290.3000 IN.
(RE4N74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.000	BREF 1290.3000 IN.
(RE4N84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.000	XMRP .0000 IN.
(RE4N53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	YMRP .0000 IN.
(RE4N64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.000	ZMRP .0000 IN.
					SCALE .0200

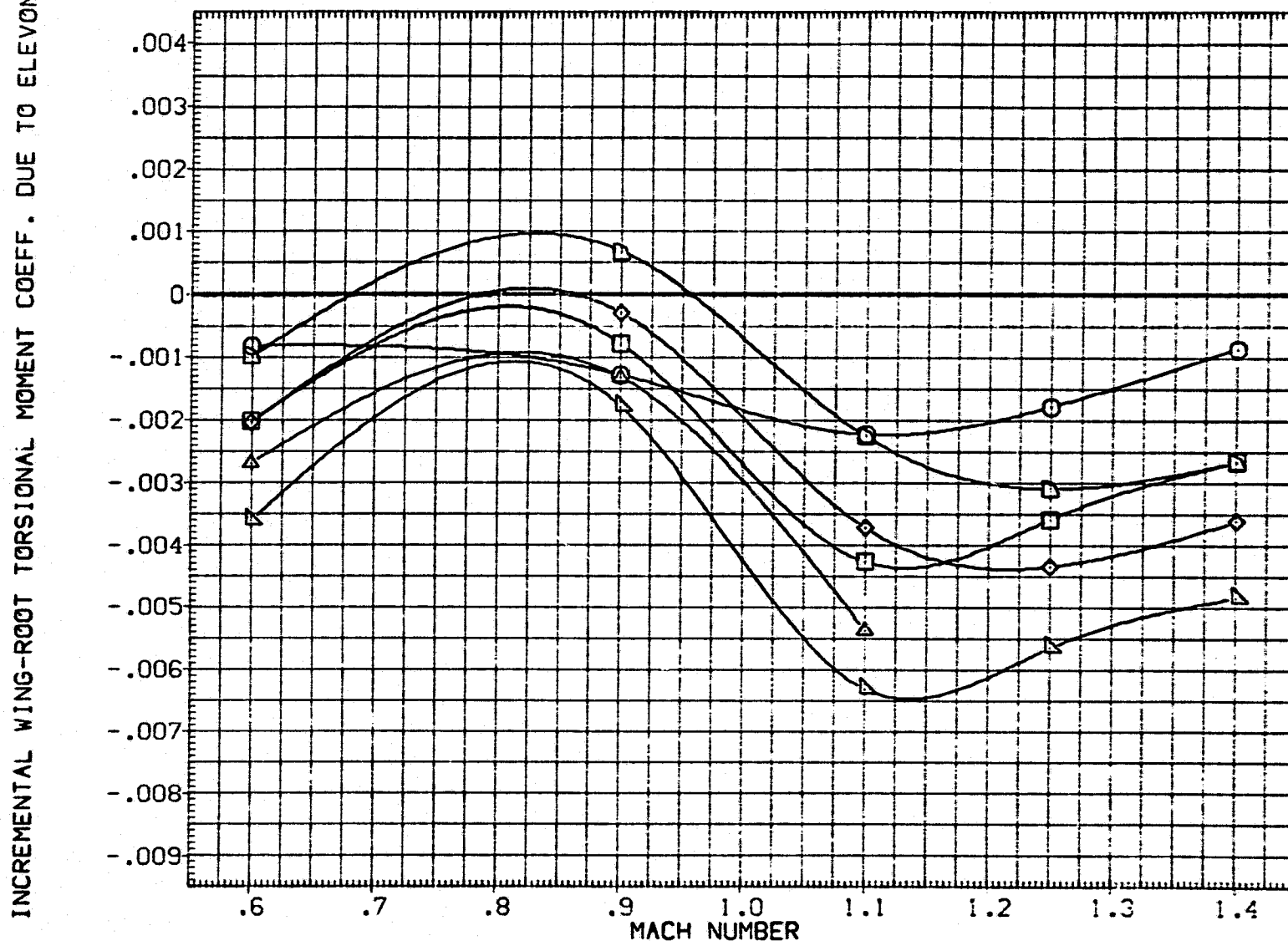


FIG. 112 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVIB	DELVOB	ALPHA	REFERENCE INFORMATION		
RE4NA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.000	SREF	2690.0000	50.FT.
RE4N90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.000	LREF	1290.3000	IN.
RE4N74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.000	BREF	1290.3000	IN.
RE4N84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.000	XMRP	.0000	IN.
RE4N53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	YMRP	.0000	IN.
RE4N64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL WING NORMAL-FORCE COEFFICIENT DUE TO ELEVON. DCNWE

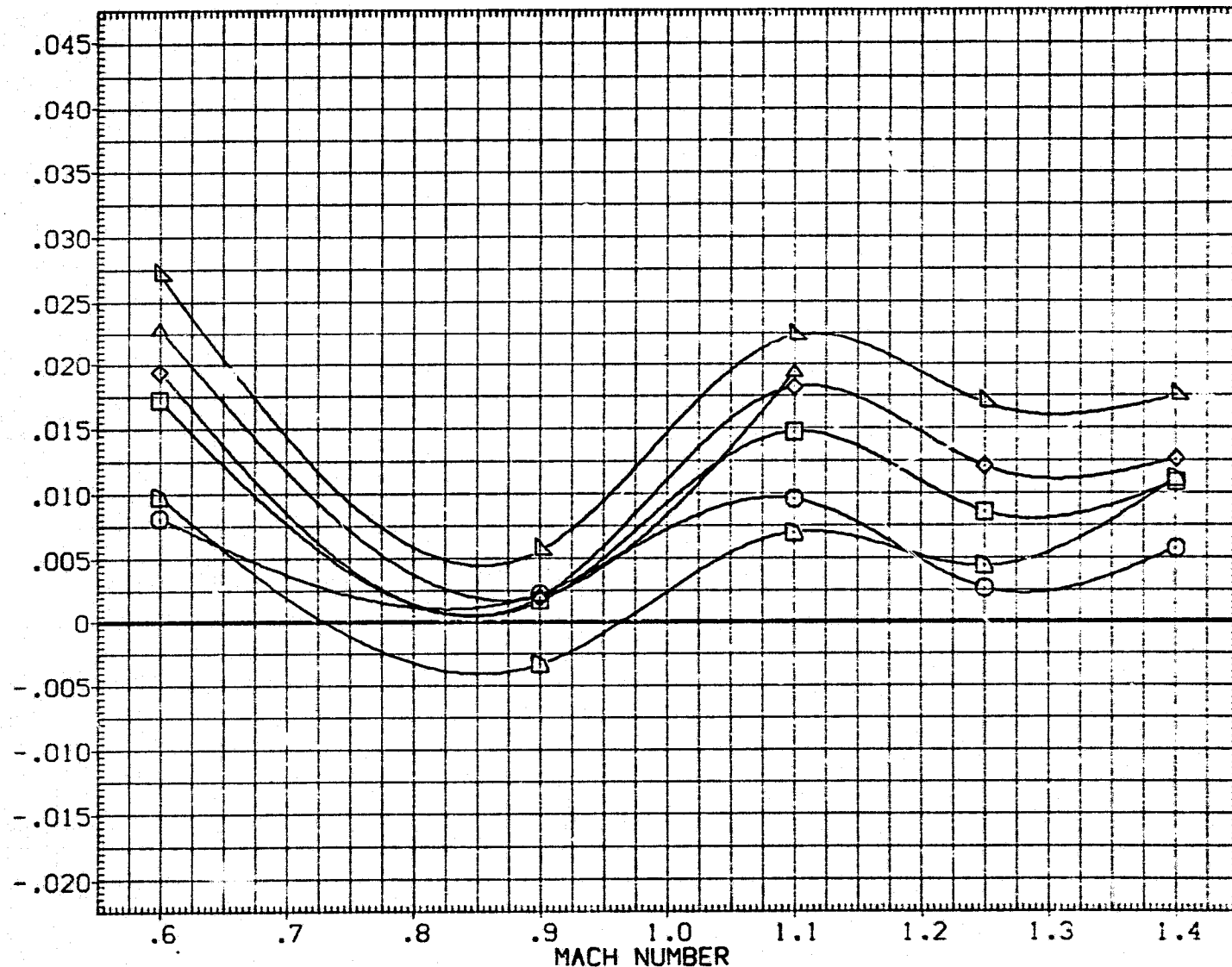


FIG. 112 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER OFF

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVID	DELVOB	ALPHA	REFERENCE INFORMATION	
OCBMWE					SREF	2690.0000 SQ.FT.
(RE4NA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.000	LREF	1290.3000 IN.
(RE4N95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.000	BREF	1290.3000 IN.
(RE4N79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.000	XMRP	.0000 IN.
(RE4N97)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.000	YMRP	.0000 IN.
(RE4N58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	ZMRP	.0000 IN.
(RE4N69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.000	SCALE	.0200

INCREMENTAL WING-ROOT BENDING-MOMENT COEFF. DUE TO ELEVON.

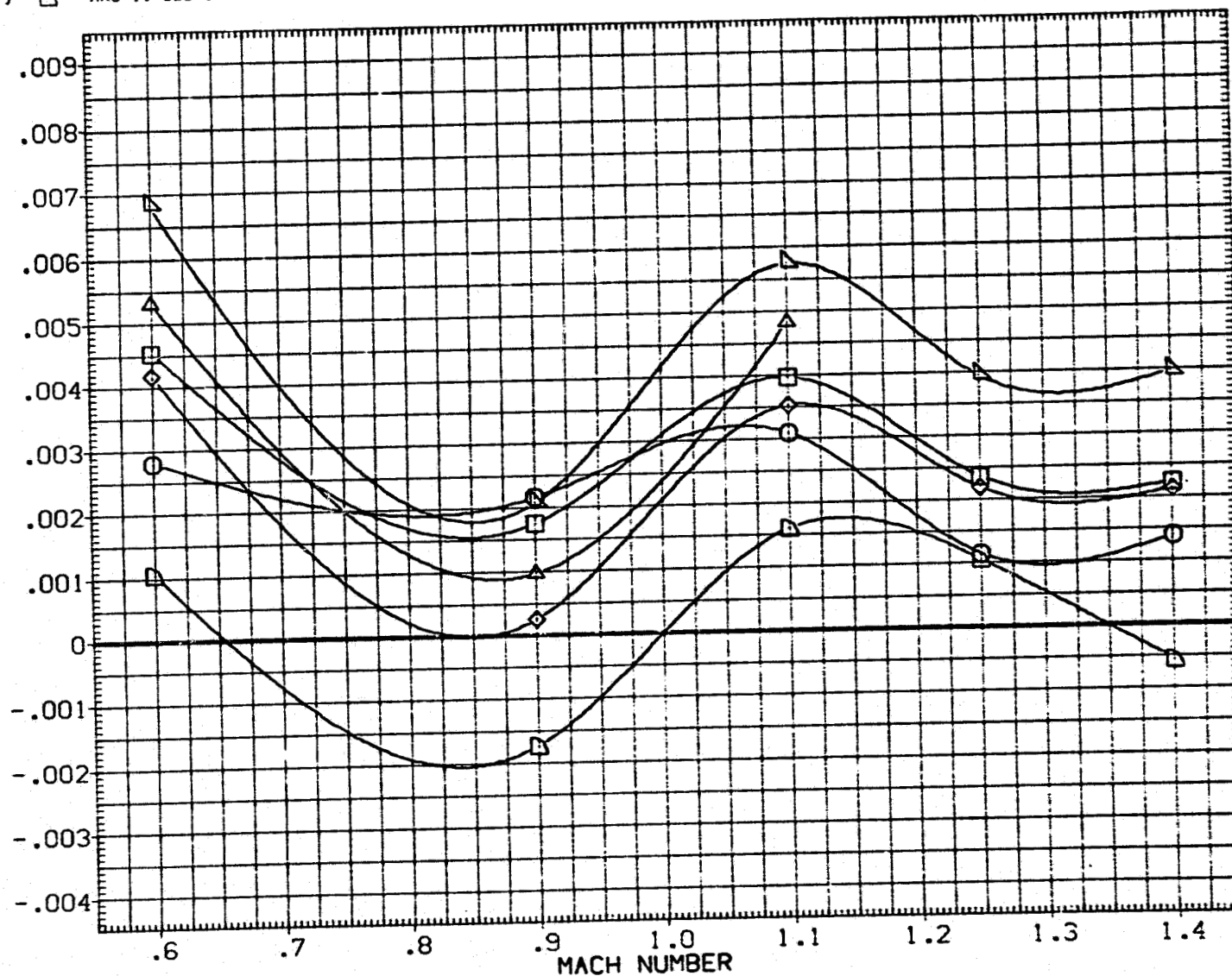


FIG. 113 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVI8	DELVO8	ALPHA	REFERENCE INFORMATION		
(RE4NA5)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	4.000	.000	SREF	2690.0000	SQ.FT.
(RE4N95)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	4.000	4.000	.000	LREF	1290.3000	IN.
(RE4N79)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	.000	.000	BREF	1290.3000	IN.
(RE4N87)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	2.000	.000	XMRP	.0000	IN.
(RE4N58)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	4.000	.000	YMRP	.0000	IN.
(RE4N69)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	8.000	-4.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

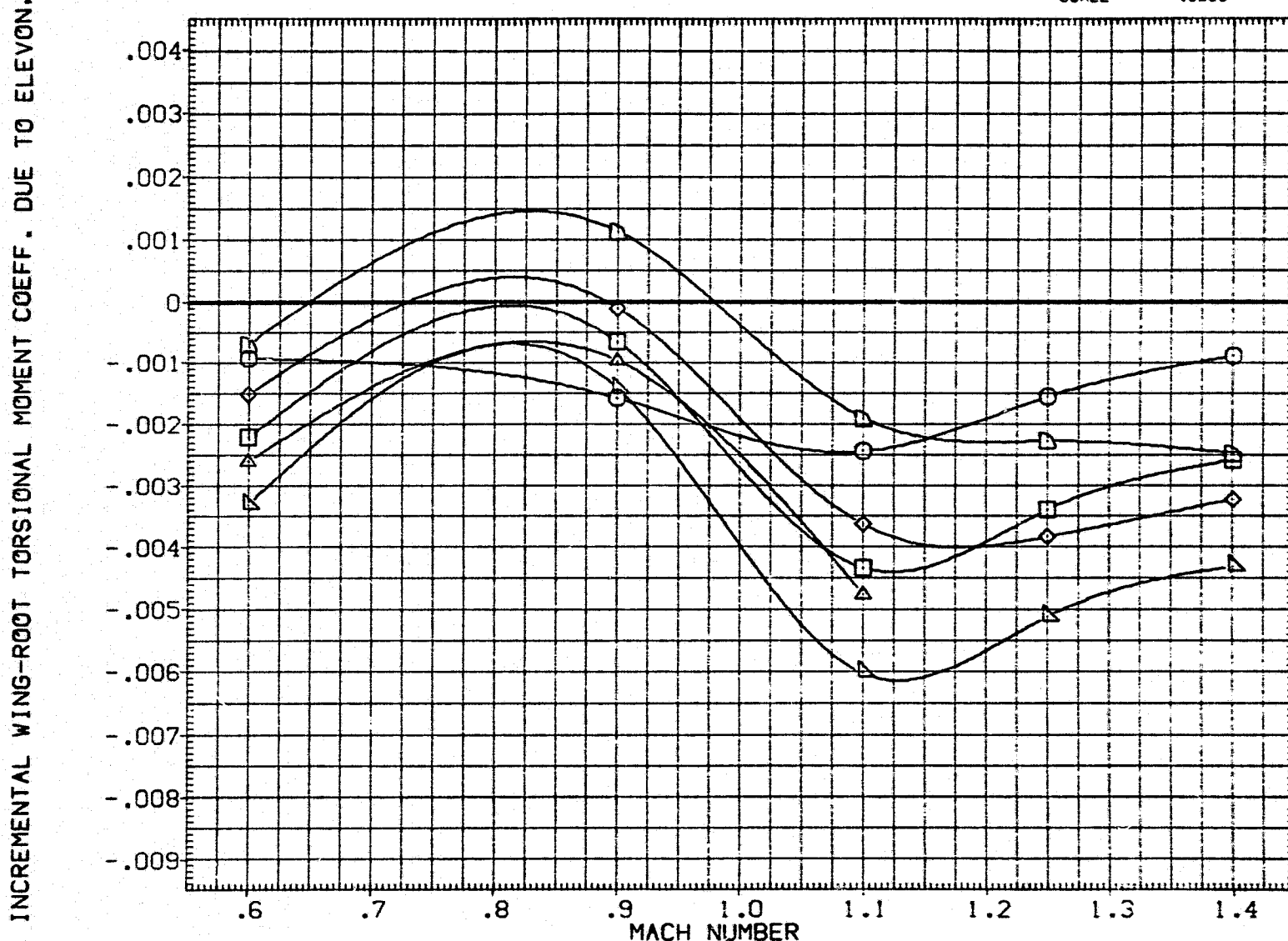


FIG. 113 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER ON

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVB	DELVOB	ALPHA	REFERENCE INFORMATION		
(RE4NA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.000	SREF	2690.0000	SC.FT.
(RE4N95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.000	LREF	1290.3000	IN.
(RE4N79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.000	BREF	1290.3000	IN.
(RE4N87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.000	XMRP	.0000	IN.
(RE4N58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	YMRP	.0000	IN.
(RE4N69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL WING NORMAL-FORCE COEFFICIENT DUE TO ELEVON. DCNWE

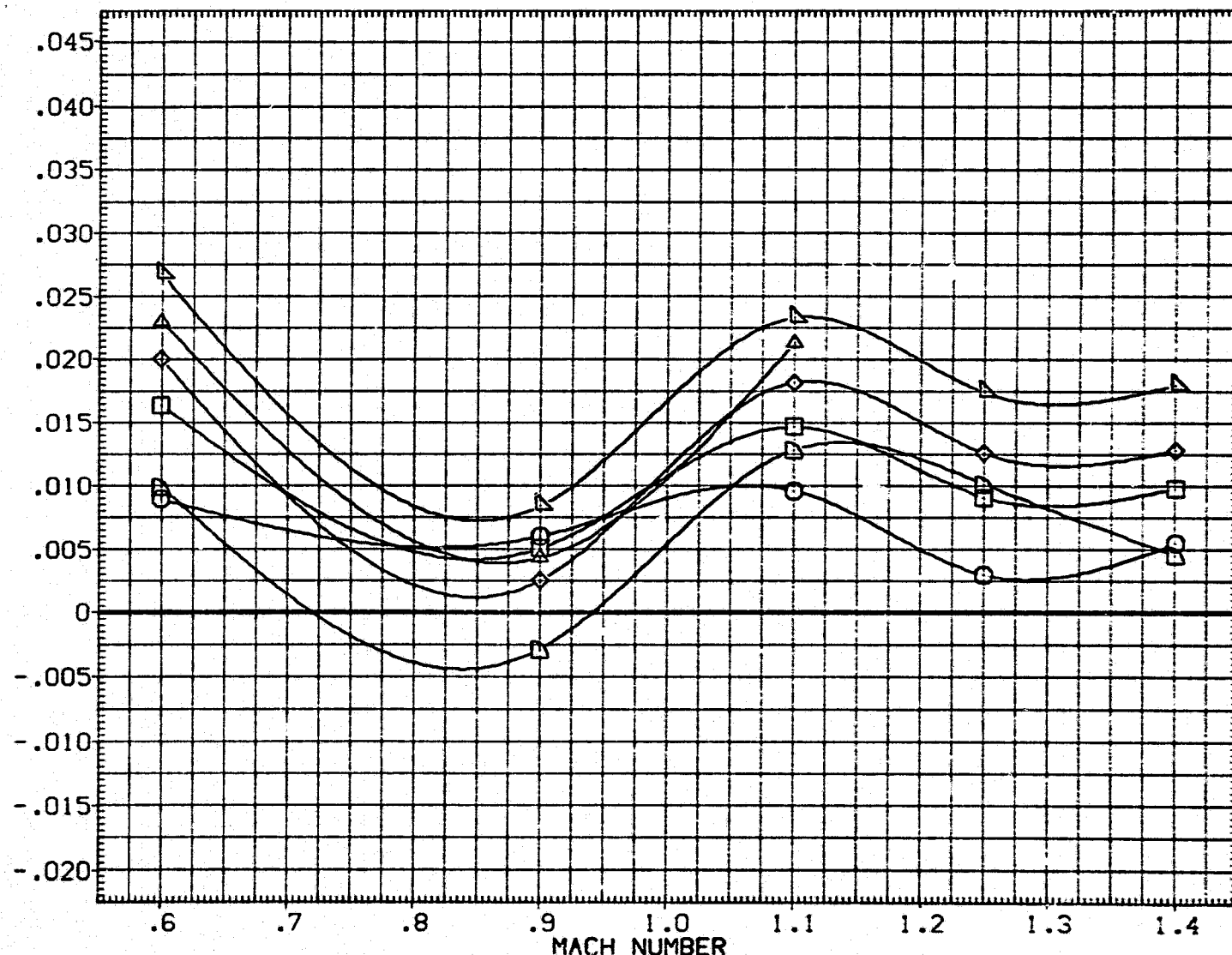


FIG. 113 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON WING LOADS, POWER ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVB	DELVB	ALPHA	REFERENCE INFORMATION		
(RE4NA0)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	4.000	.000	SREF	2690.0000	SO.FT.
(RE4N90)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	4.000	4.000	.000	LREF	1290.3000	IN.
(RE4N74)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	.000	.000	BREF	1290.3000	IN.
(RE4N84)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	2.000	.000	XMRP	.0000	IN.
(RE4N53)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	YMRP	.0000	IN.
(RE4N64)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	-4.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL INBOARD ELEVON HINGE-MOMENT COEF. DUE TO ELEVON. DCHEIE

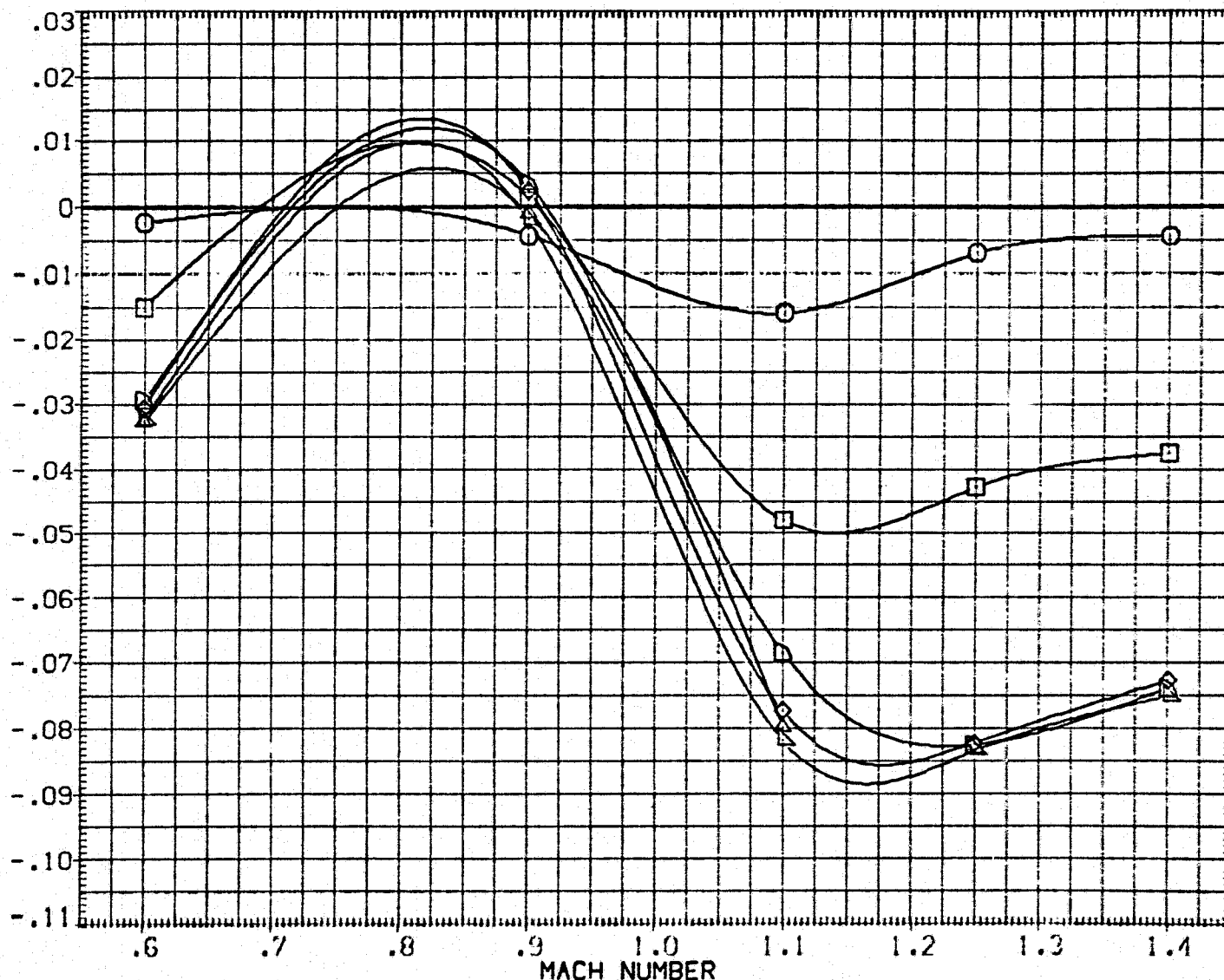


FIG. 114 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVI8	DELVO8	ALPHA	REFERENCE INFORMATION		
(RE4NA0)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	4.000	.000	SREF	2690.0000	SQ.FT.
(RE4N90)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	4.000	4.000	.000	LREF	1290.3000	IN.
(RE4N74)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	.000	.000	BREF	1290.3000	IN.
(RE4N84)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	2.000	.000	XMRP	.0000	IN.
(RE4N53)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	4.000	.000	YMRP	.0000	IN.
(RE4N64)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	8.000	-4.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL OUTBOARD ELEVON HINGE-MOMENT COEF. DUE TO ELEVON. DCHEGE

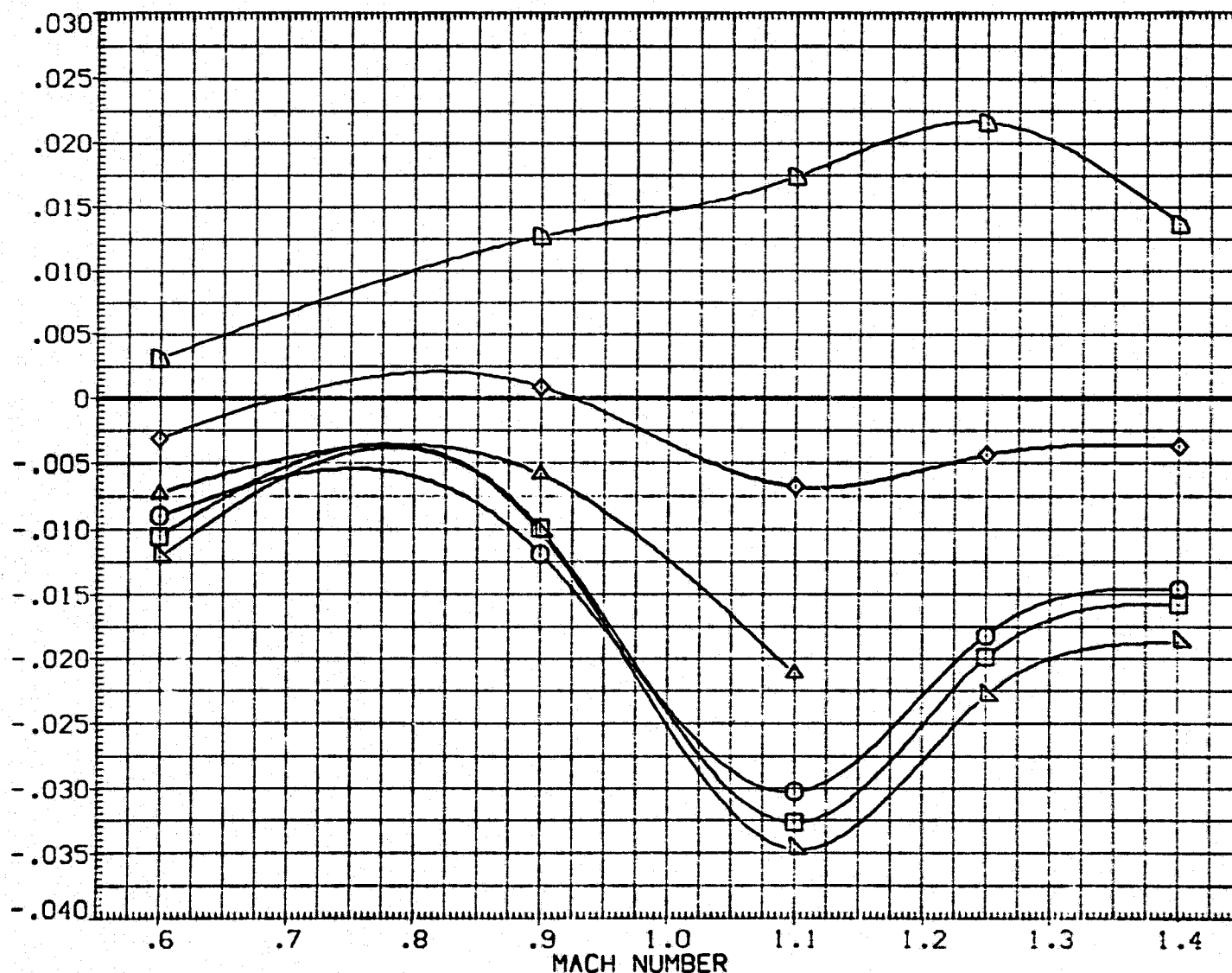


FIG. 114 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER OFF
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL VIB	DEL VOB	ALPHA	REFERENCE INFORMATION		
(RE4NA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.000	SREF	2690.0000	SQ.FT.
(RE4N95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.000	LREF	1290.3000	IN.
(RE4N79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.000	BREF	1290.3000	IN.
(RE4N87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.000	XMRP	.0000	IN.
(RE4N58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	YMRP	.0000	IN.
(RE4N69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL INBOARD ELEVON HINGE-MOMENT COEF. DUE TO ELEVON. DCHEIE

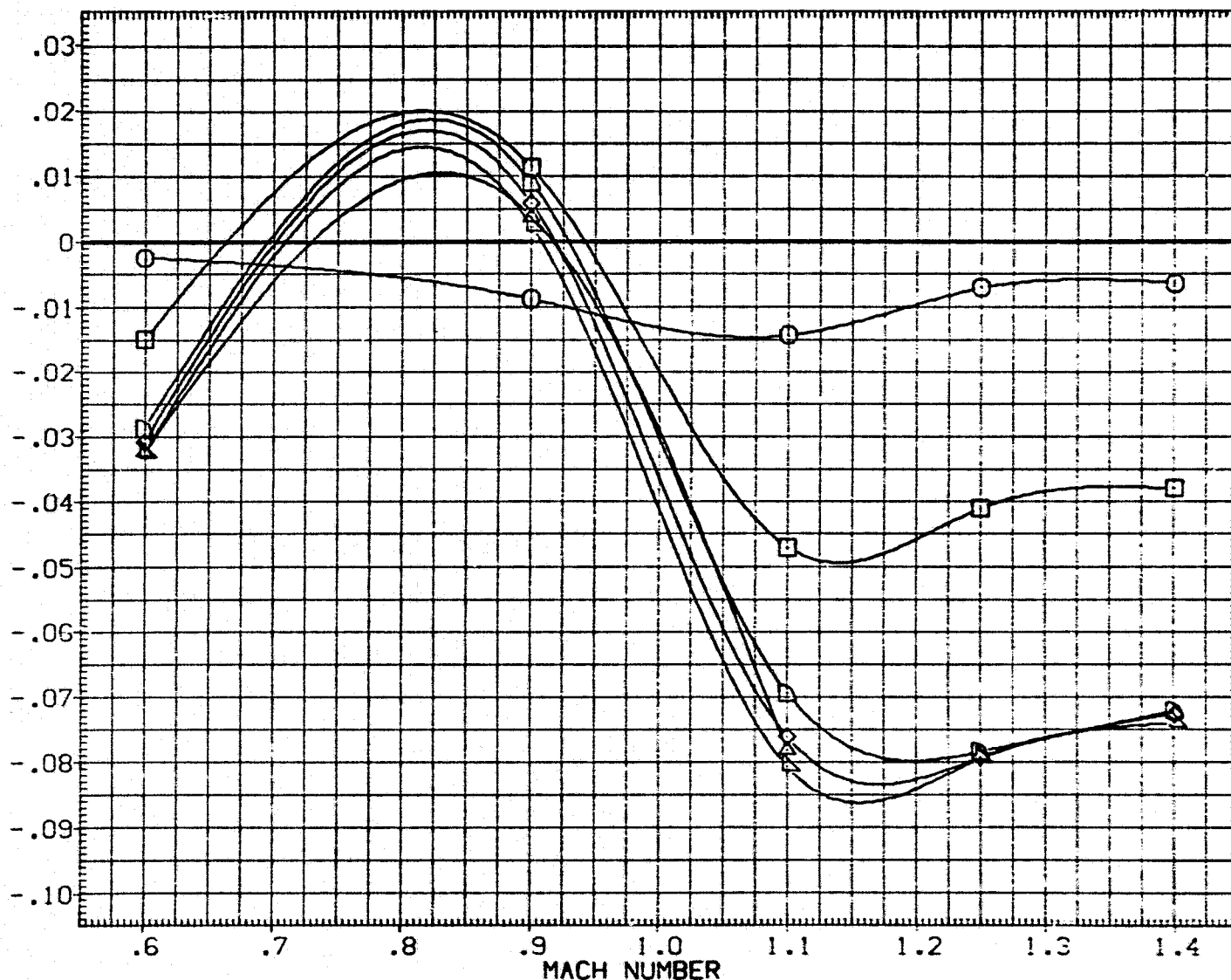


FIG. 115 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELVB	DELVB	ALPHA	REFERENCE INFORMATION
(RE4NA5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	4.000	.000	SREF 2690.0000 SQ.FT.
(RE4N95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	4.000	4.000	.000	LREF 1290.3000 IN.
(RE4N79)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	.000	.000	BREF 1290.3000 IN.
(RE4N87)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	2.000	.000	XMRF .0000 IN.
(RE4N58)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	YMRF .0000 IN.
(RE4N69)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	-4.000	.000	ZMRF .0000 IN.
					SCALE .0200

INCREMENTAL OUTBOARD ELEVON HINGE-MOMENT COEF. DUE TO ELEVON. DCHEGE

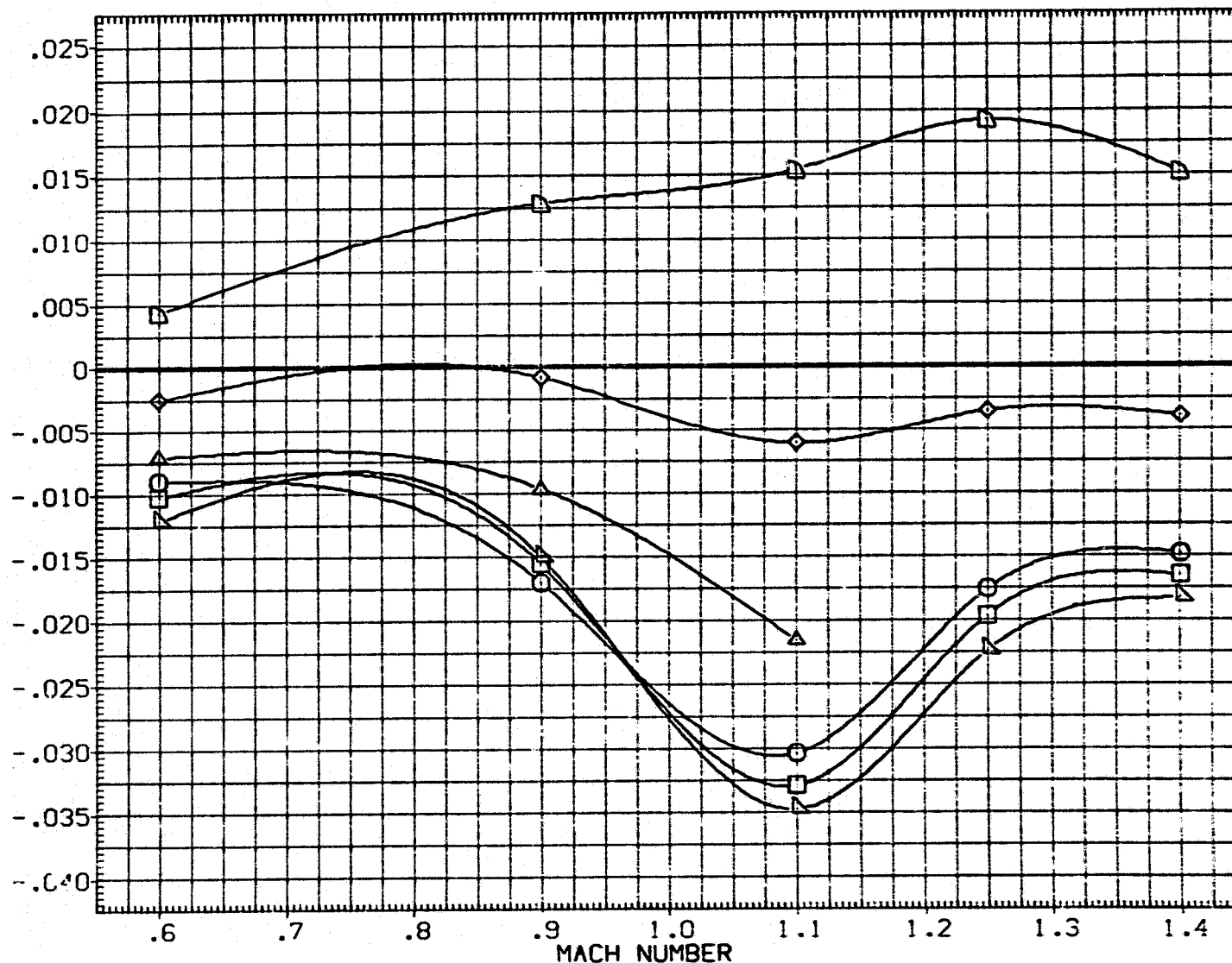


FIG. 115 SUMMARY, EFFECTS OF ELEVON DEFLECTION ON ELEVON HINGE MOMENTS POWER ON
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(RE4N20) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	50.FT.
(RE4N16) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N11) △	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N95) △	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

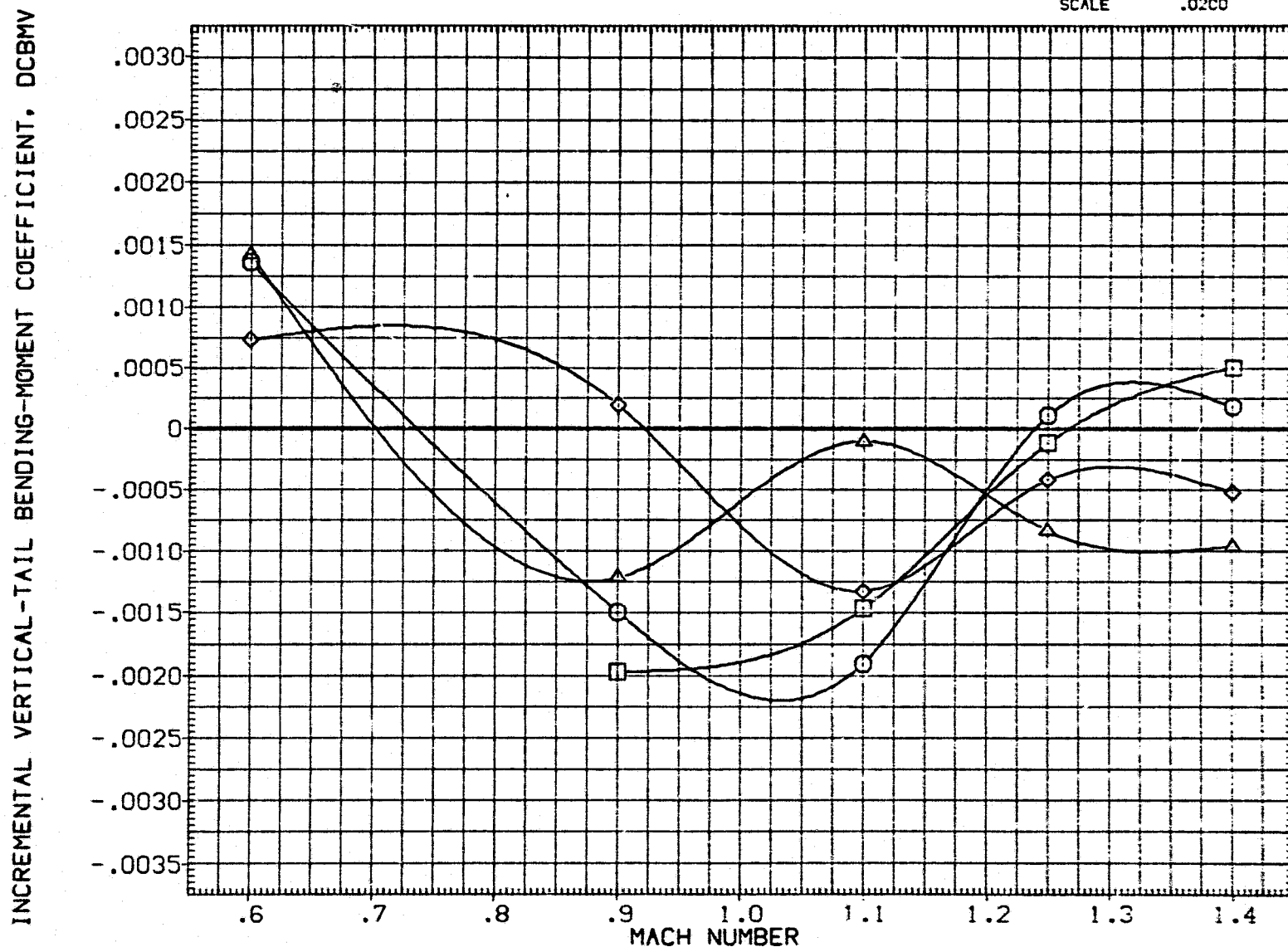


FIG. 116 SUMMARY, EFFECTS SSME PLUME SIZE ON VERTICAL TAIL LOADS

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(RE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL VERTICAL-TAIL TORSIONAL-MOMENT COEFFICIENT, DCTMV

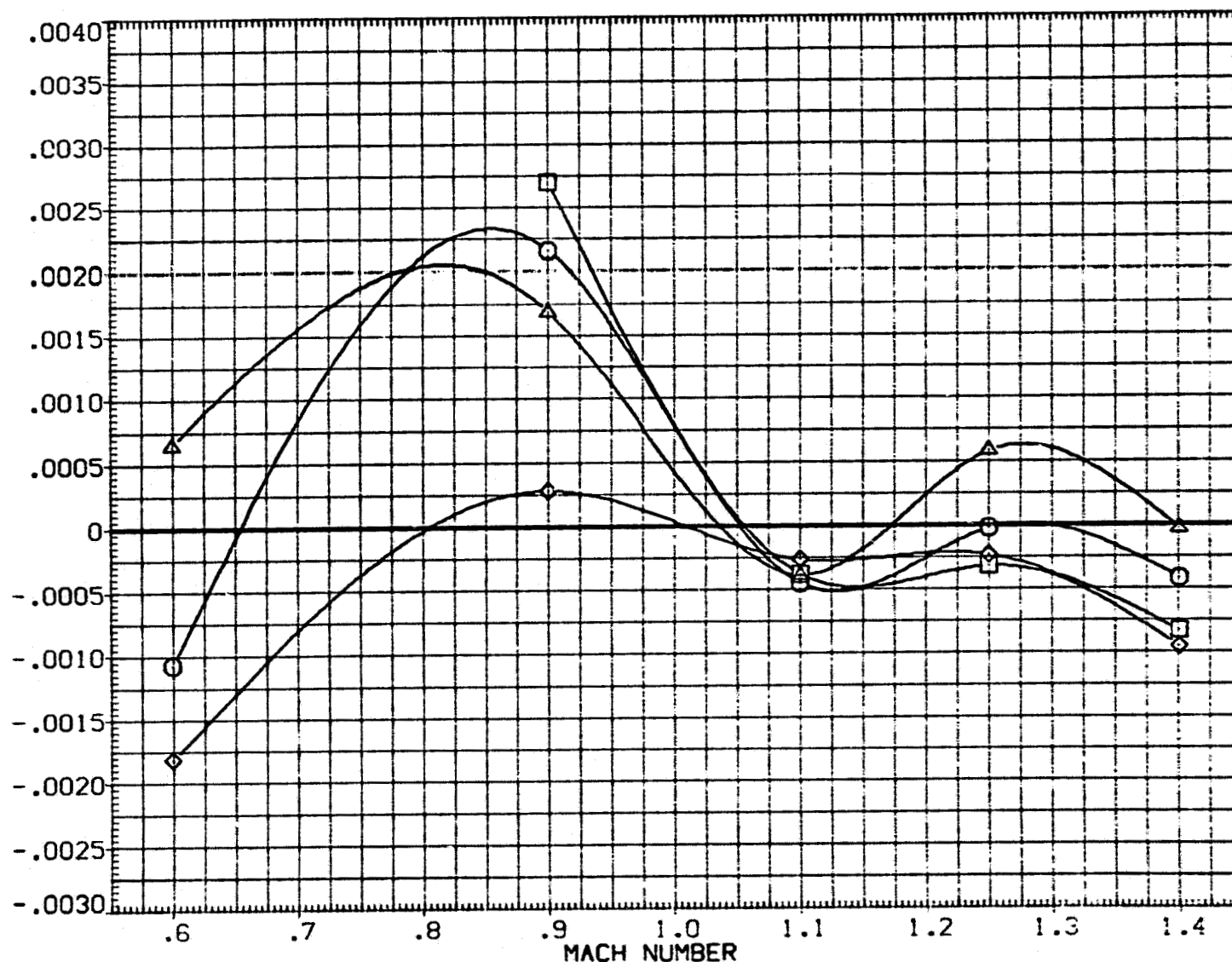


FIG. 116 SUMMARY, EFFECTS SSME PLUME SIZE ON VERTICAL TAIL LOADS

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	50.FT.
(RE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

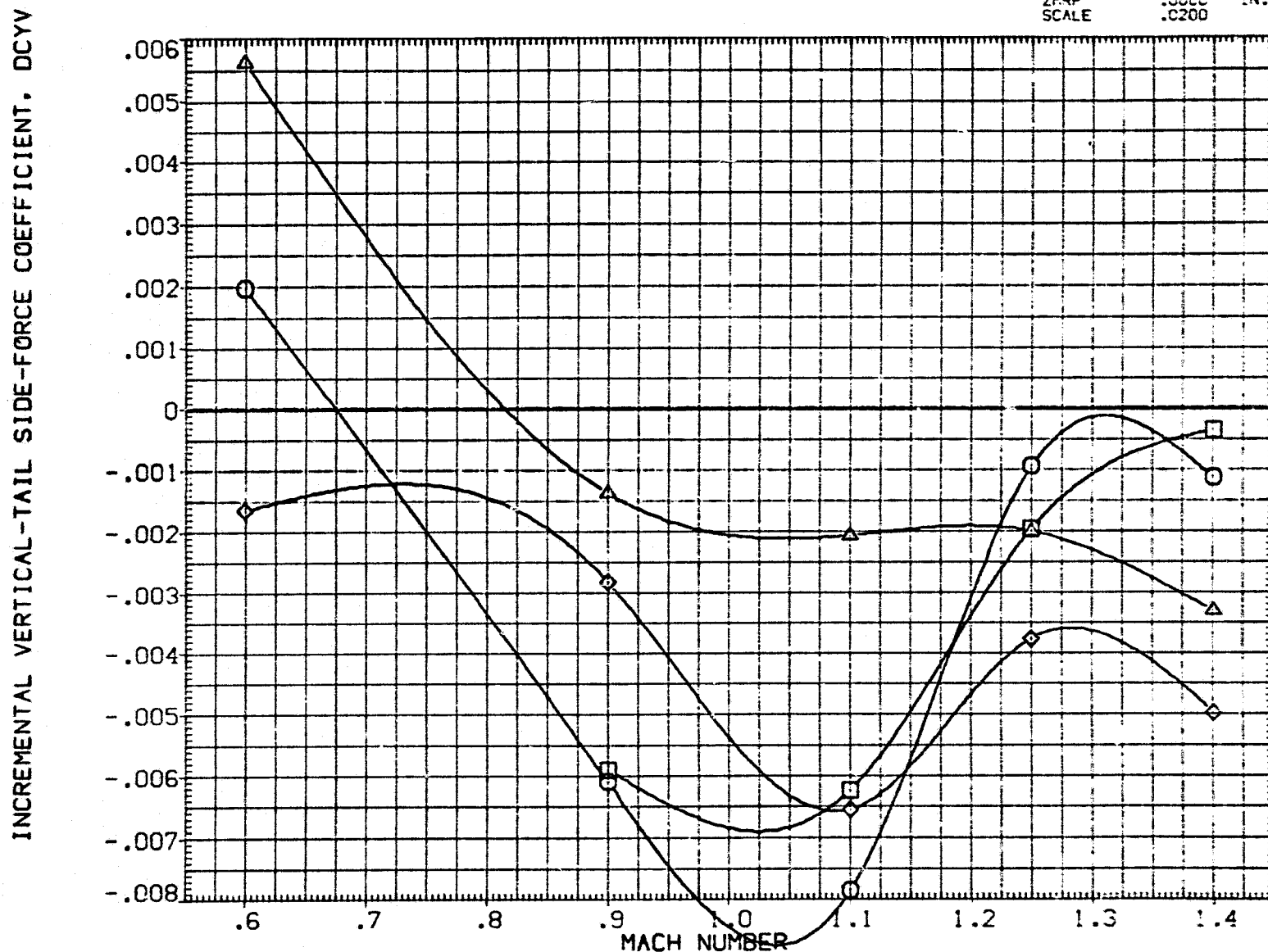


FIG. 116 SUMMARY, EFFECTS SSME PLUME SIZE ON VERTICAL TAIL LOADS
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(RE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(RE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	LREF	1290.3000	IN.
(RE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	BREF	1290.3000	IN.
(RE4N95)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

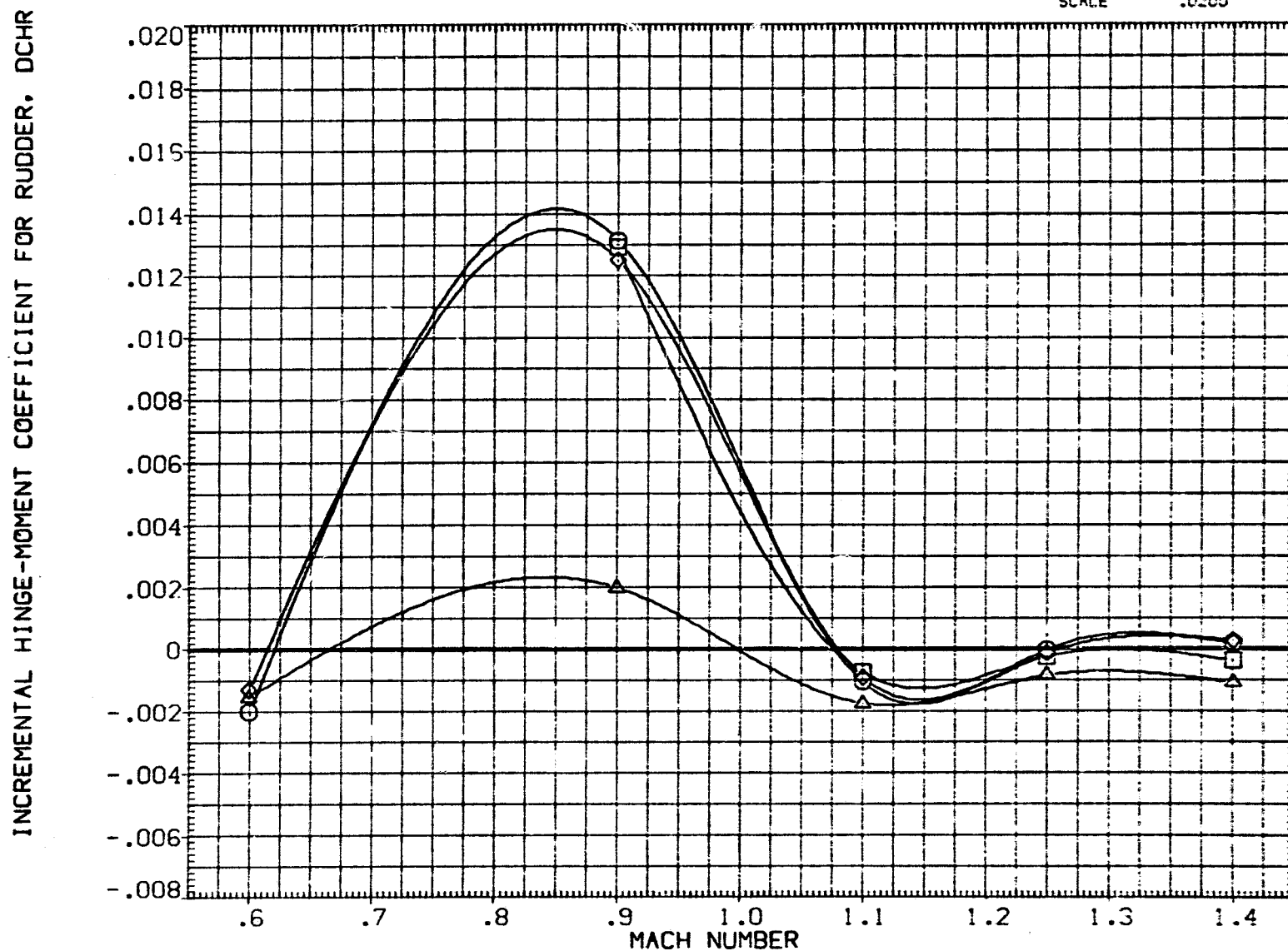


FIG. 117 SUMMARY, EFFECTS SSME PLUME SIZE ON RUDDER HINGE MOMENTS

(A) BETA = .00

SYMBOL	ELV-1B	PARAMETRIC VALUES			
○	.000	ALPHA	-4.000	BETA	.000
□	.000	ELV-0B	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

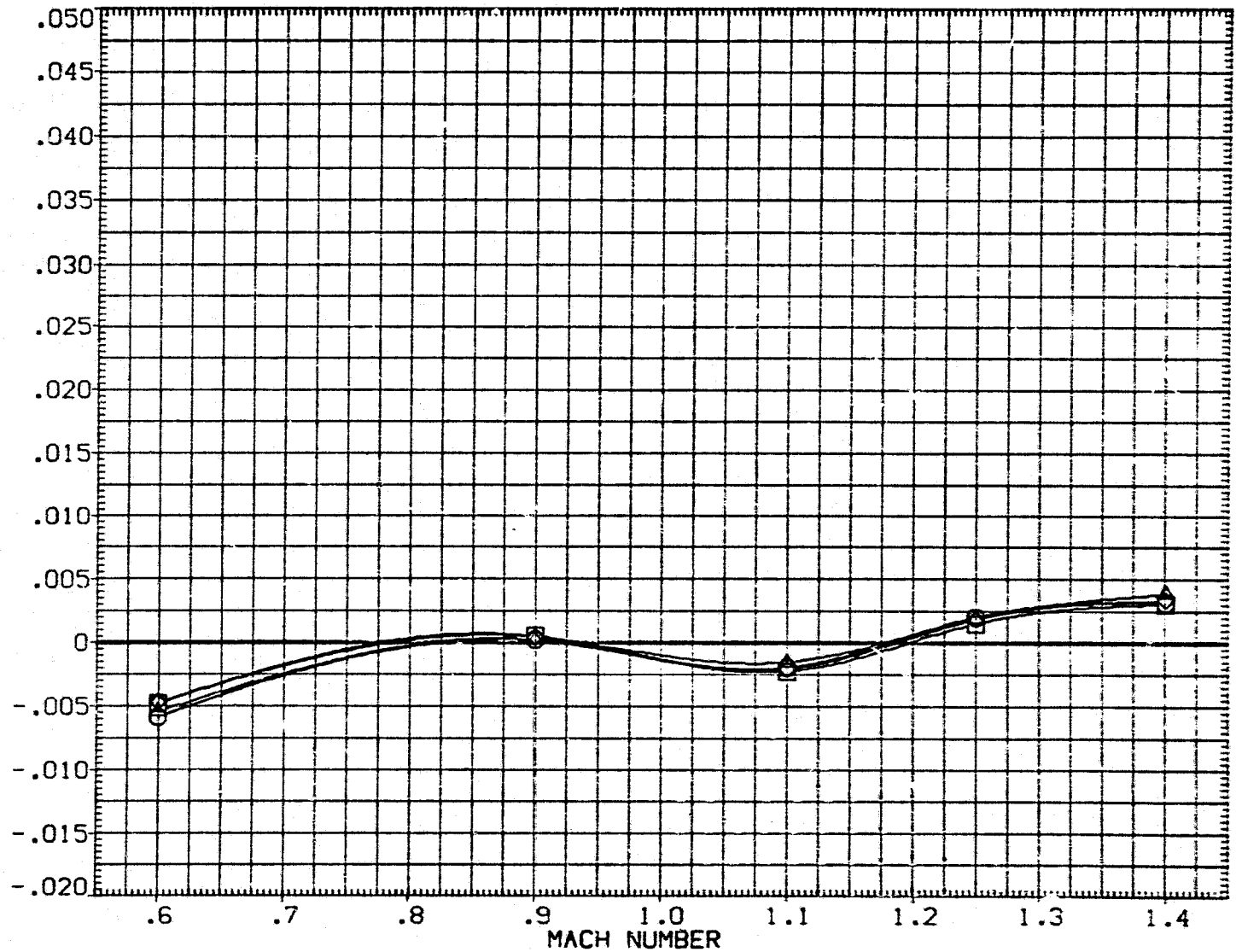


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4X28)

SYMBOL	ELV-18	ALPHA	PARAMETRIC VALUES	BETA	
○	.000		.000	.000	
□	.000	ELV-08	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
YMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

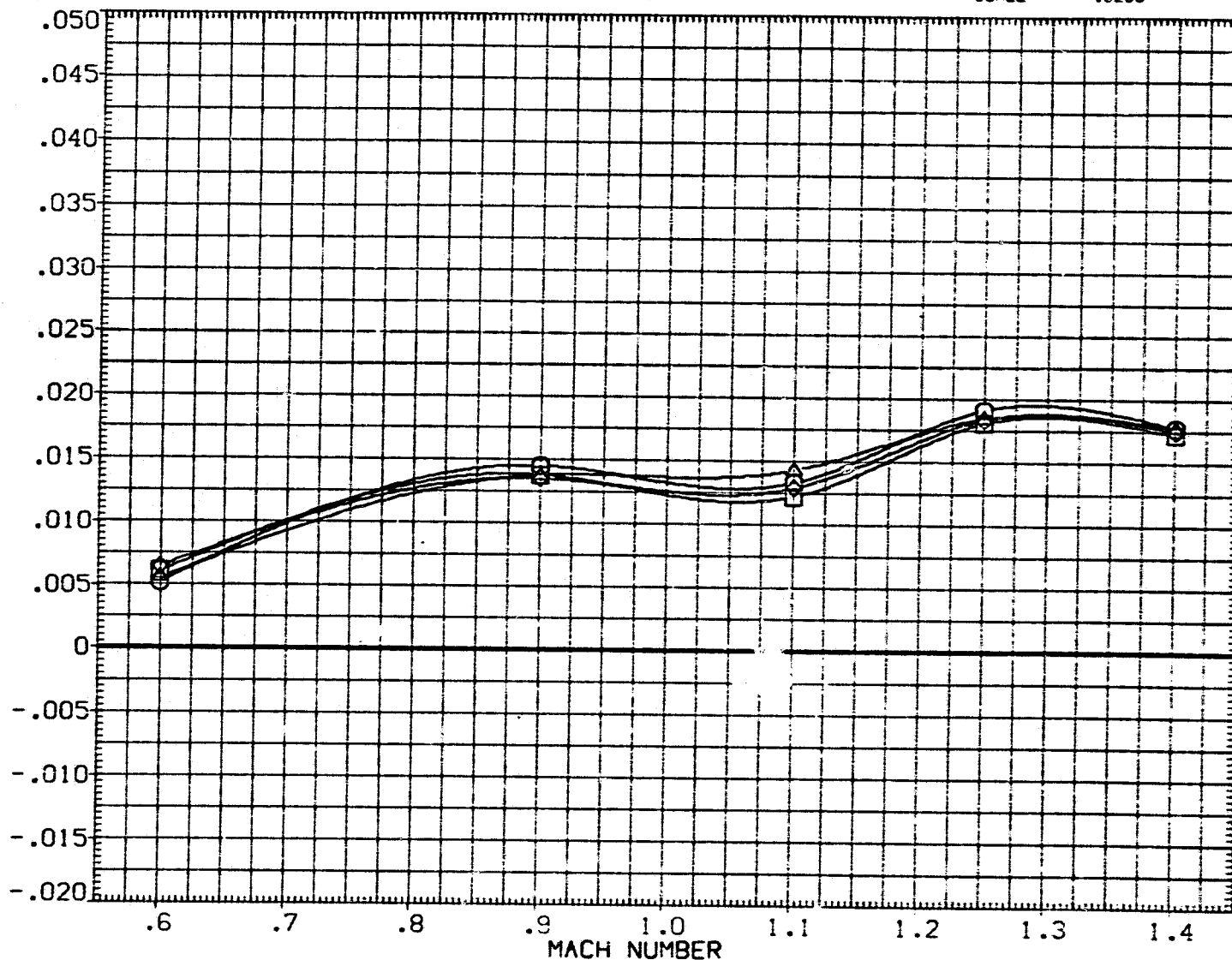


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-18	PARAMETRIC VALUES
○	.000	ALPHA 4.000 BETA .000
□	.000	ELV-GB .000 RN/L 3.400
◇	.000	
△	.000	

REFERENCE INFORMATION		
SREF	2690.000P	SQ.FT.
LREF	1290.3	IN.
BREF	1290.	IN.
XMRP	.00	IN.
YMRP	.00	IN.
ZMRP	.00	IN.
SCALE	.0200	

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

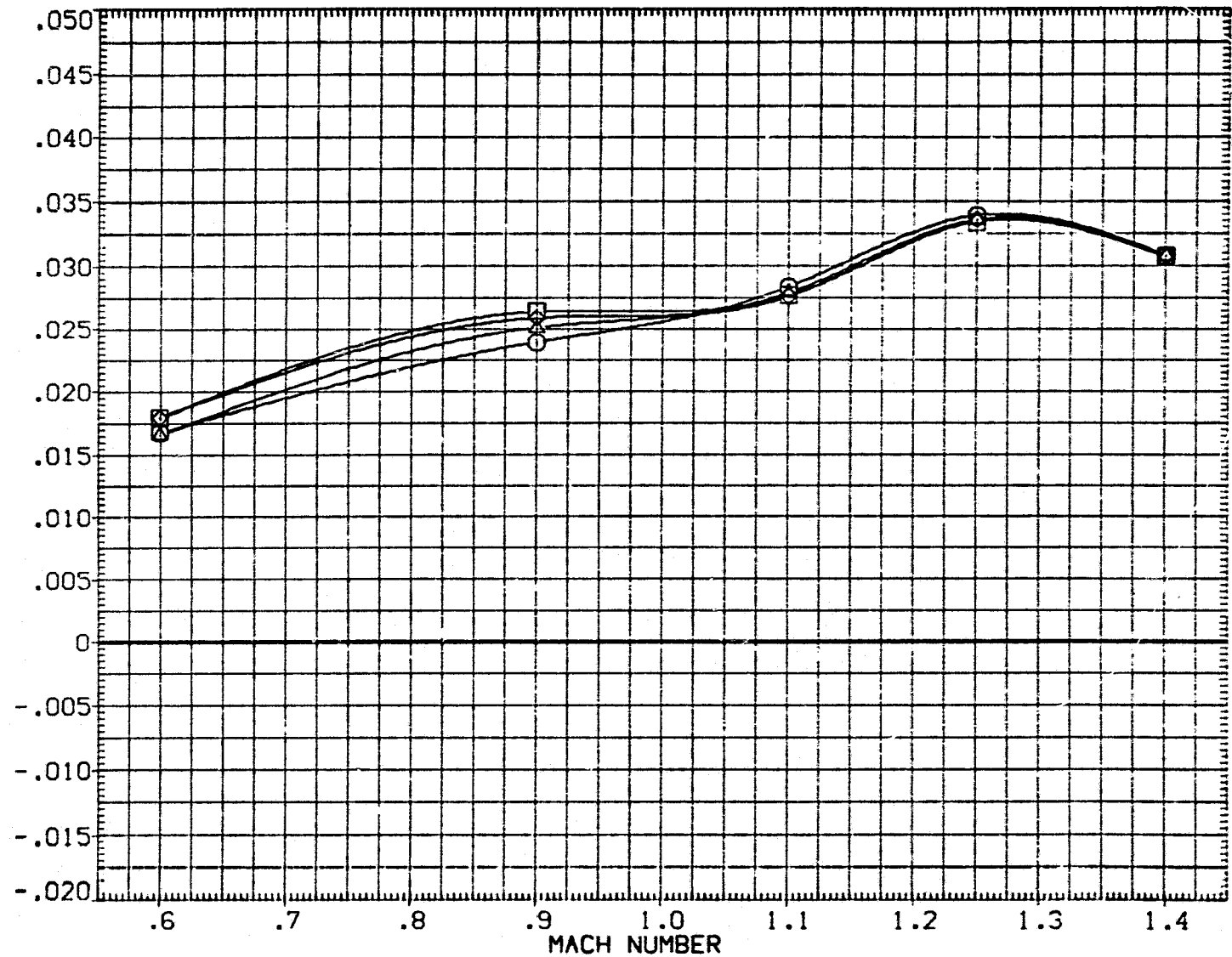


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF) (RE4X28)

SYMBOL	ELV-18	PARAMETRIC VALUES			
○	.000	ALPHA	-4.000	BETA	.000
□	.000	ELV-08	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT. CTMW

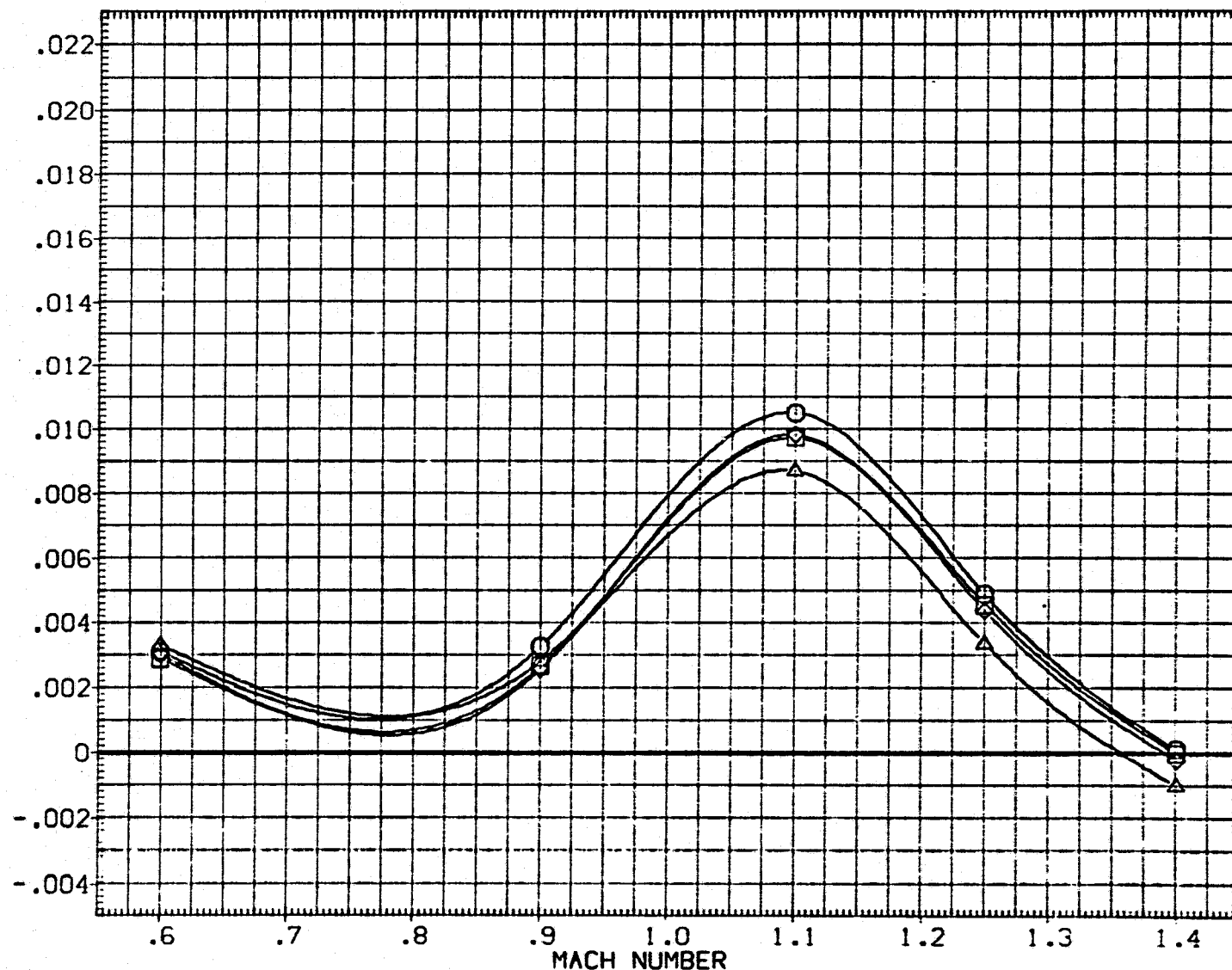


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	
○	.000		.000	.000	
□	.000	ELV-0B	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION	
SREF	2690.0000 SO.FT.
LREF	1290.3000 IN.
BREF	1290.3000 IN.
XMRP	.0000 IN.
YMRP	.0000 IN.
ZMRP	.0000 IN.
SCALE	.0200

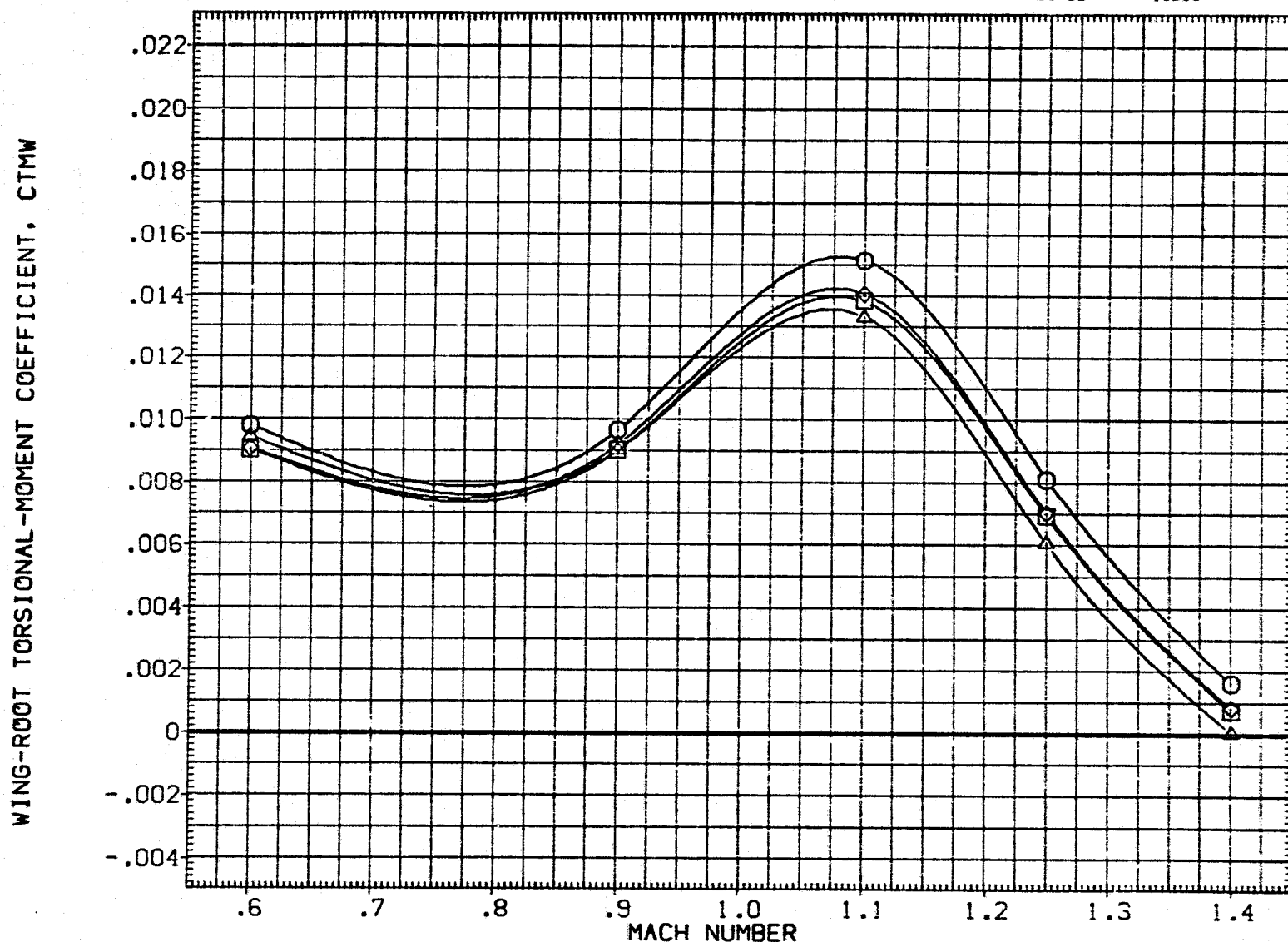


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	
○	.000	4.000		.000	
□	.000	ELV-0B	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

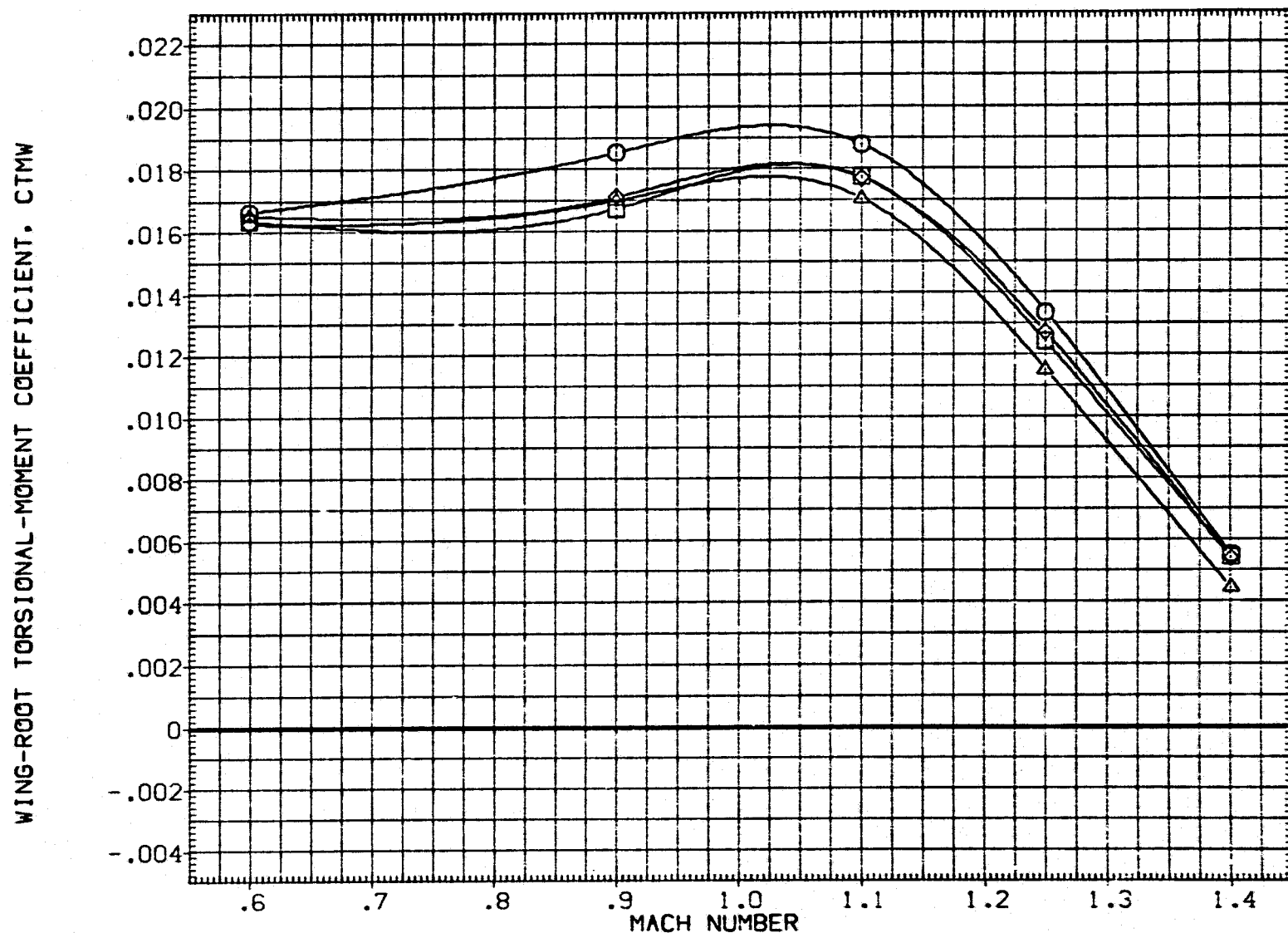


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-1B	PARAMETRIC VALUES
○	.000	ALPHA -4.000 BETA .000
□	.000	ELV-08 .000 RN/L 3.400
◇	.000	
△	.000	

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	1290.3000 IN.
BREF	1290.3000 IN.
XMRP	.0000 IN.
YMRP	.0000 IN.
ZMRP	.0000 IN.
SCALE	.0200

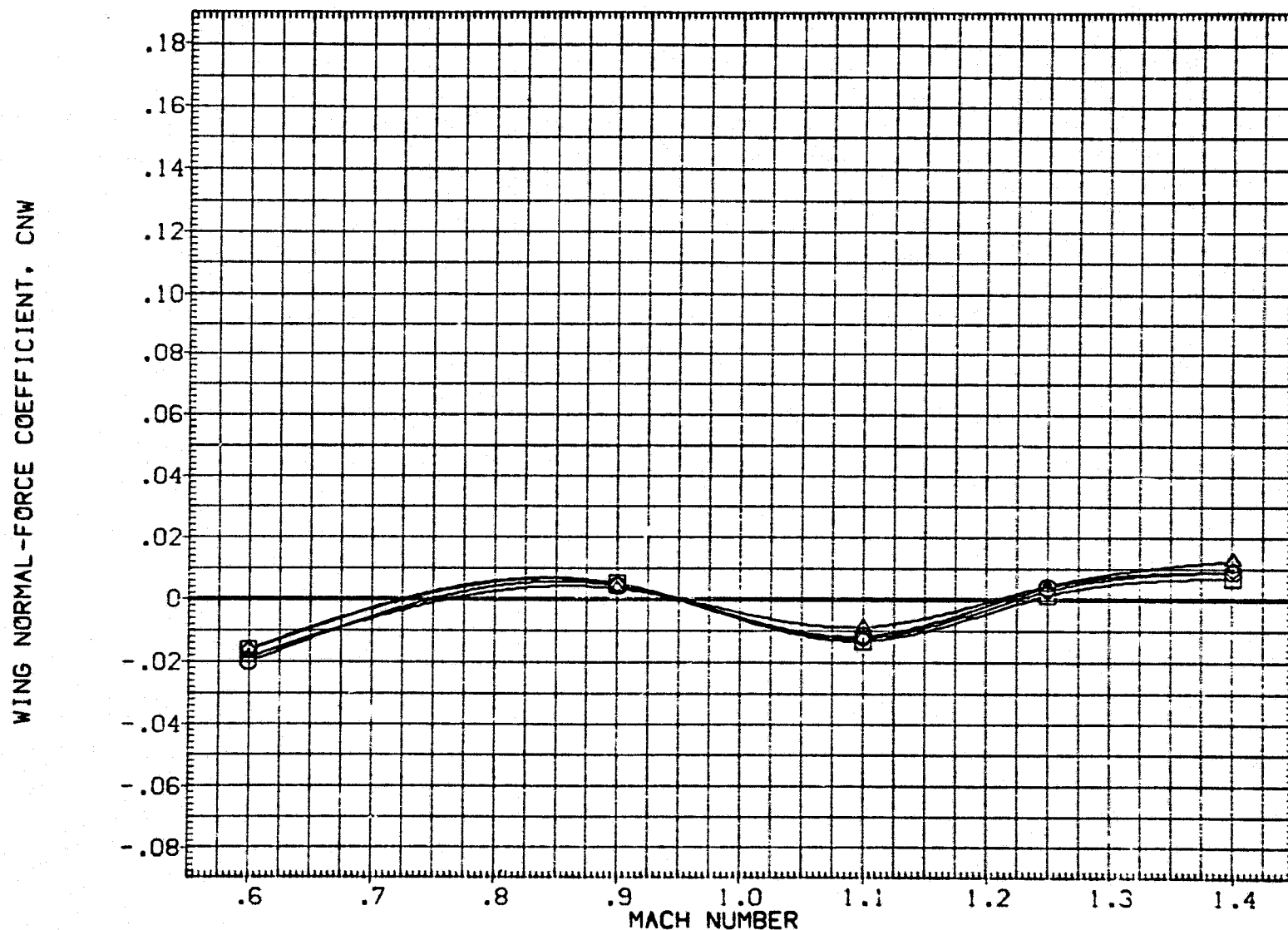


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4X28)

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	
○	.000	.000	BETA	.000
□	.000	ELV-0B	RN/L	3.400
◇	.000			
△	.000			

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

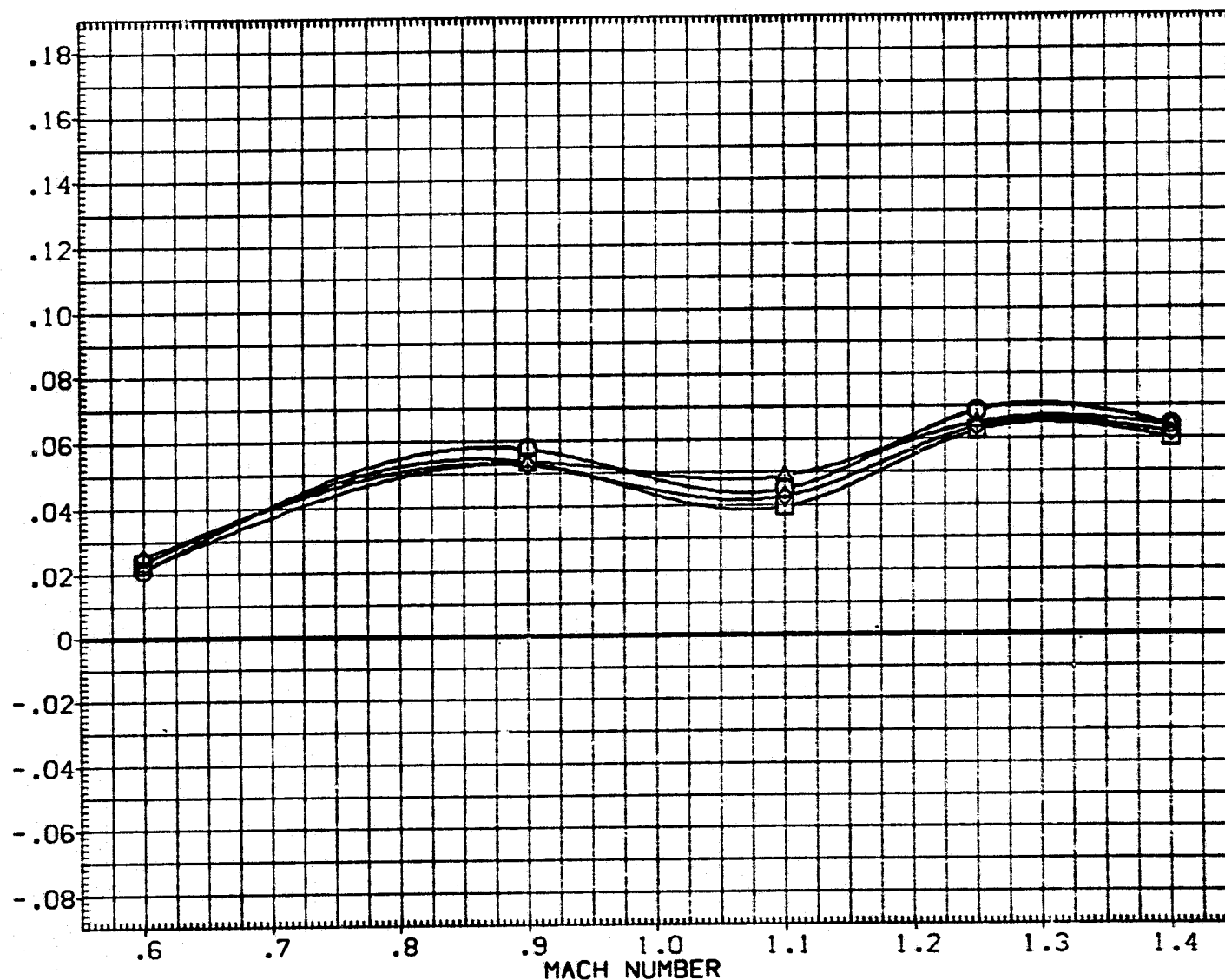


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-1B	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	4.000	BETA	.000	SREF	2690.0000	SQ.FT.
○	.000	ELV-0B	.000	RN/L	3.400	LREF	1290.3000	IN.
□	.000					BREF	1290.3000	IN.
◇	.000					XMRP	.0000	IN.
△	.000					YMRP	.0000	IN.
						ZMRP	.0000	IN.
						SCALE	.0200	

WING NORMAL-FORCE COEFFICIENT, CNW

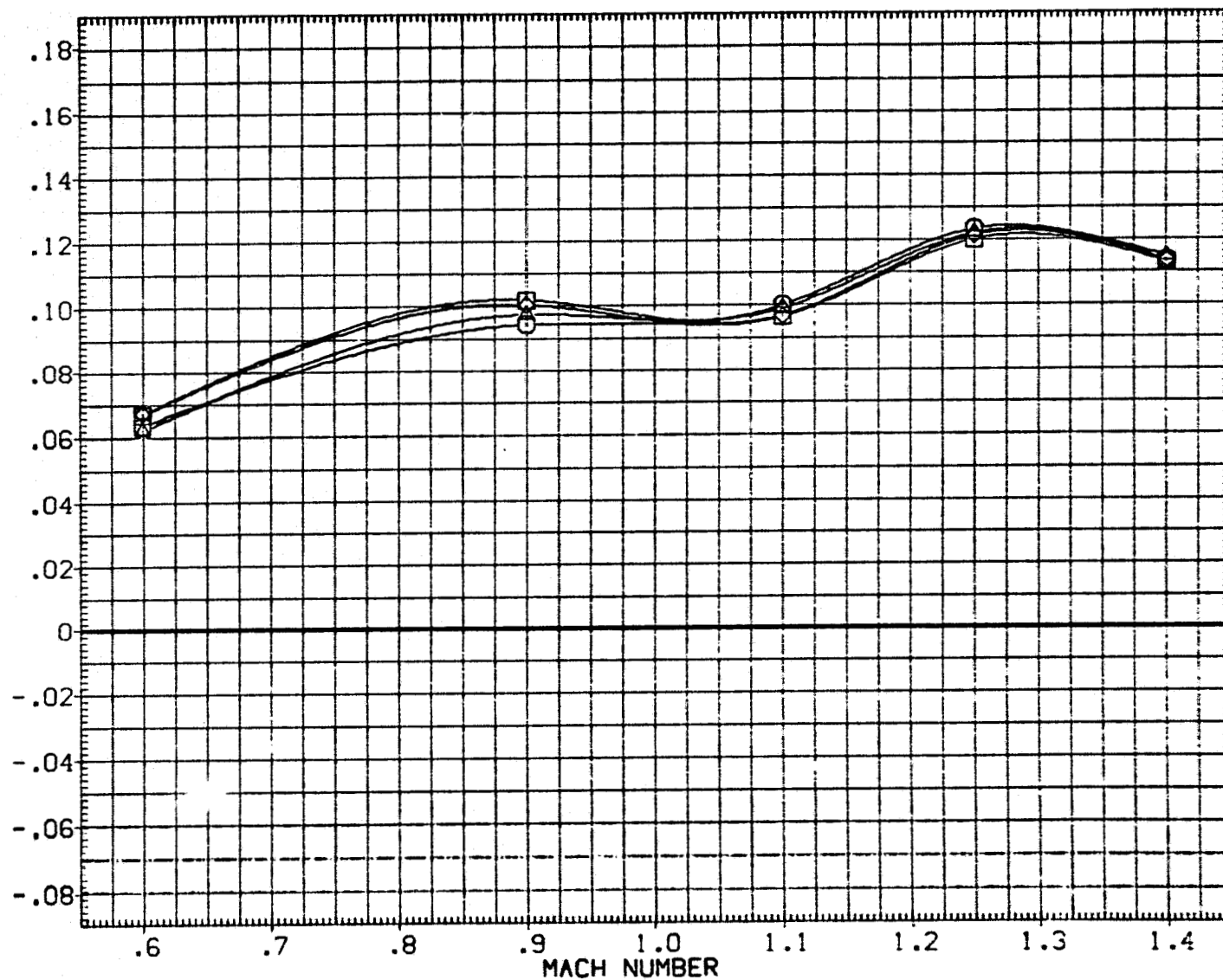


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-18	ALPHA	PARAMETRIC VALUES	BETA	REFERENCE INFORMATION
○	.000		.000	-4.000	SREF 2690.0000 SQ.FT.
□	.000	ELV-08	.000	3.400	LREF 1290.3000 IN.
◇	.000				BREF 1290.3000 IN.
△	.000				XMRP .0000 IN.
					YMRP .0000 IN.
					ZMRP .0000 IN.
					SCALE .0200

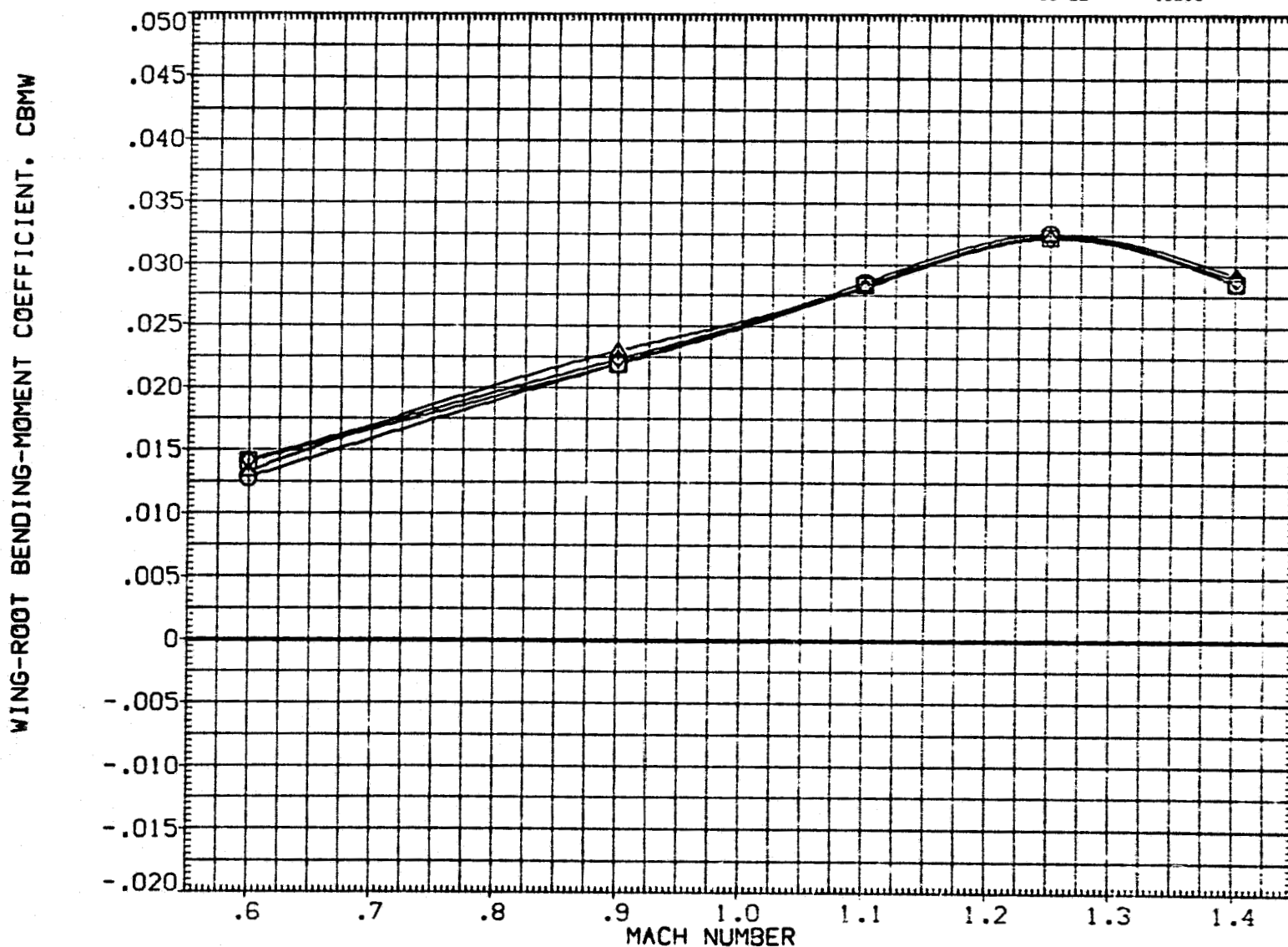


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-18	PARAMETRIC VALUES
○	.000	ALPHA .000 BETA .000
□	.000	ELV-08 .000 RN/L 3.400
◇	.000	
△	.000	

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

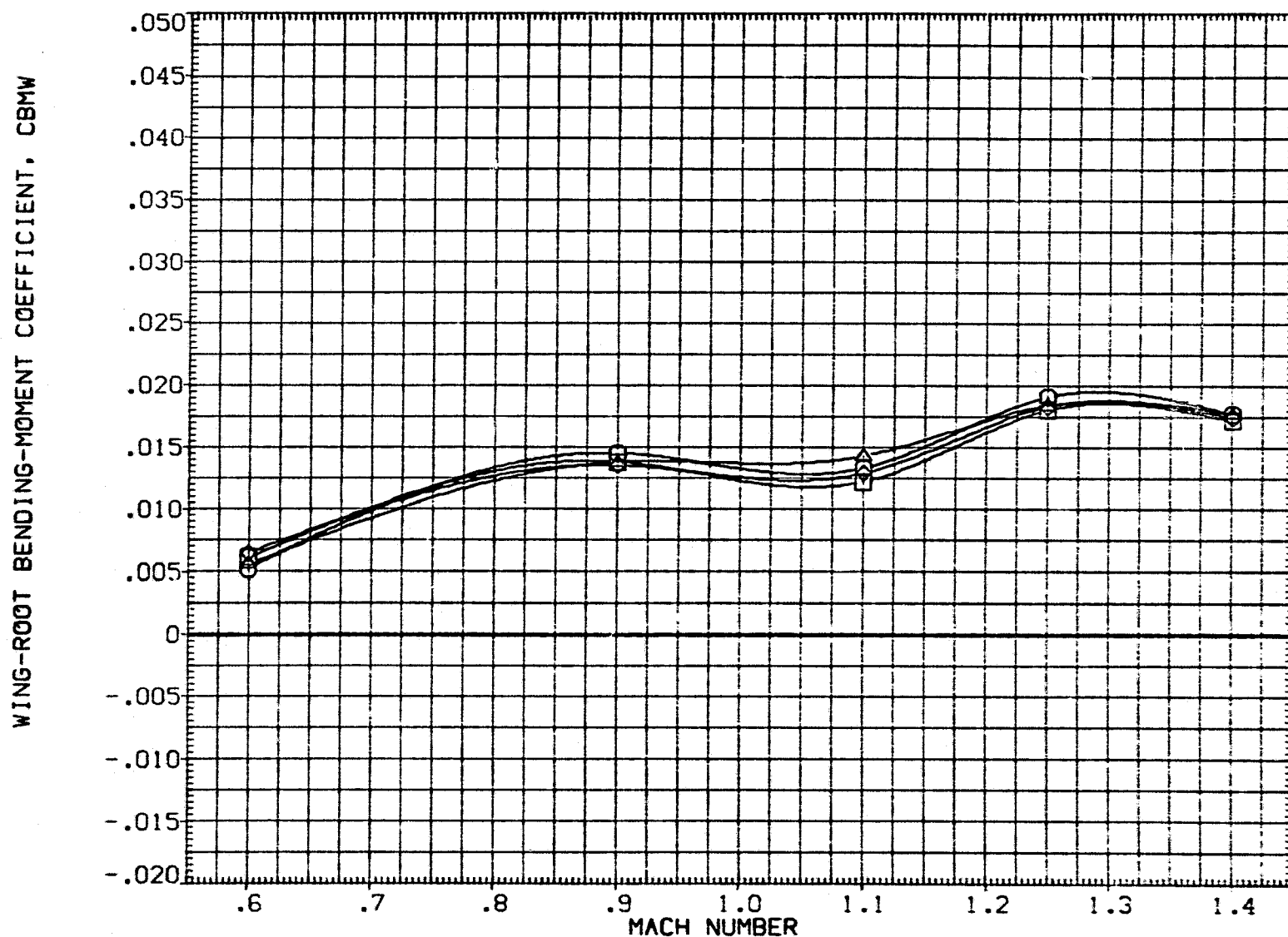


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	REFERENCE INFORMATION
○	.000	.000	.000	4.000	SREF 2690.0000 SQ.FT.
□	.000	ELV-08	.000	3.400	LREF 1290.3000 IN.
◇	.000				BREF 1290.3000 IN.
△	.000				XMRP .0000 IN.
					YMRP .0000 IN.
					ZMRP .0000 IN.
					SCALE .0200

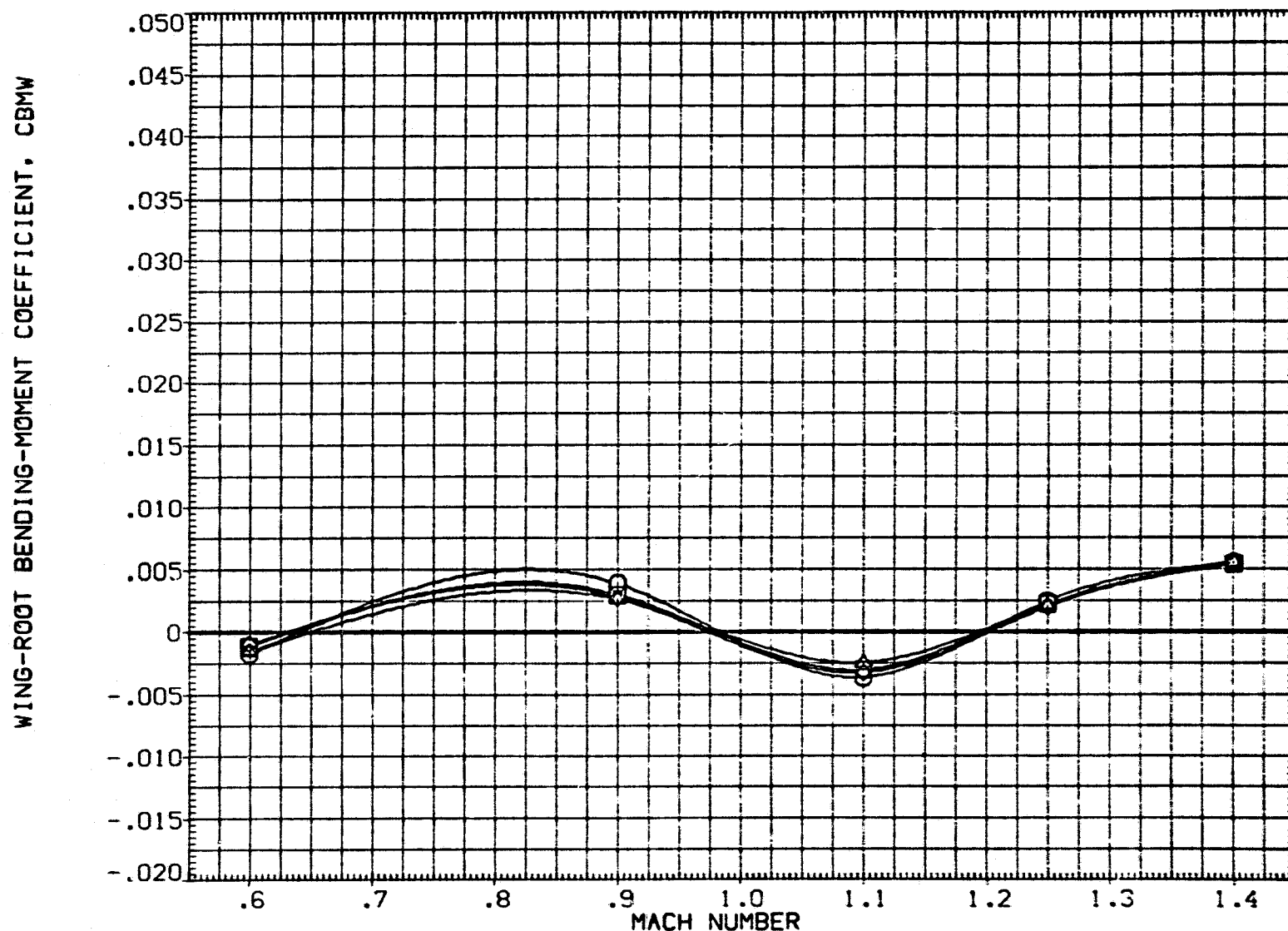


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES			REFERENCE INFORMATION		
			ELV-0B	BETA	RN/L	SREF	LREF	SQ.FT.
○	.000	.000	.000	-4.000		2690.0000	1290.3000	IN.
◇	.000	.000	.000	3.400		1290.3000		IN.
△	.000					.0000	.0000	IN.
	.000					.0000	.0000	IN.
						.0000	.0000	IN.
						SCALE	.0200	

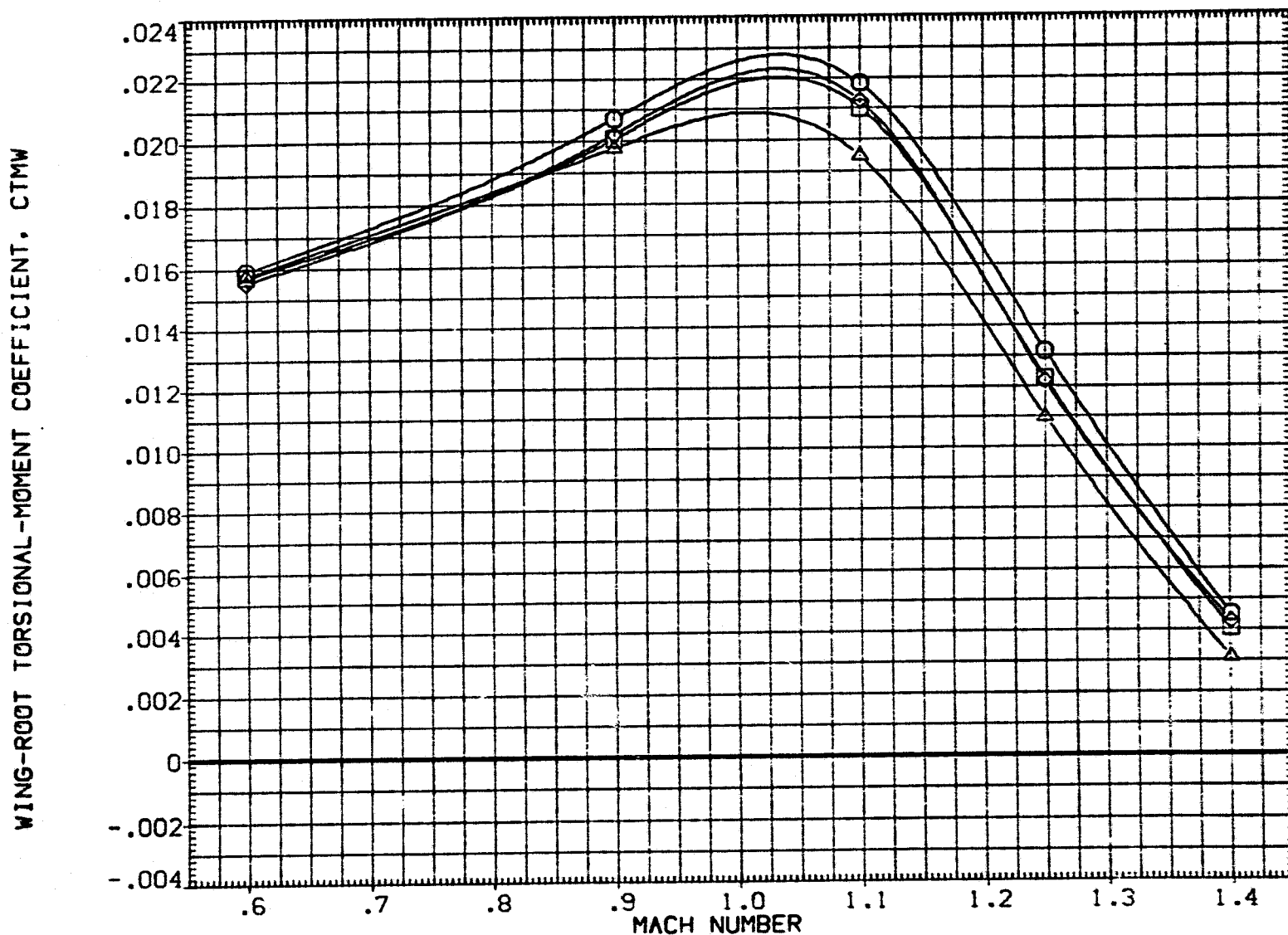


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	
○	.000		.000	.000	
□	.000	ELV-08	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

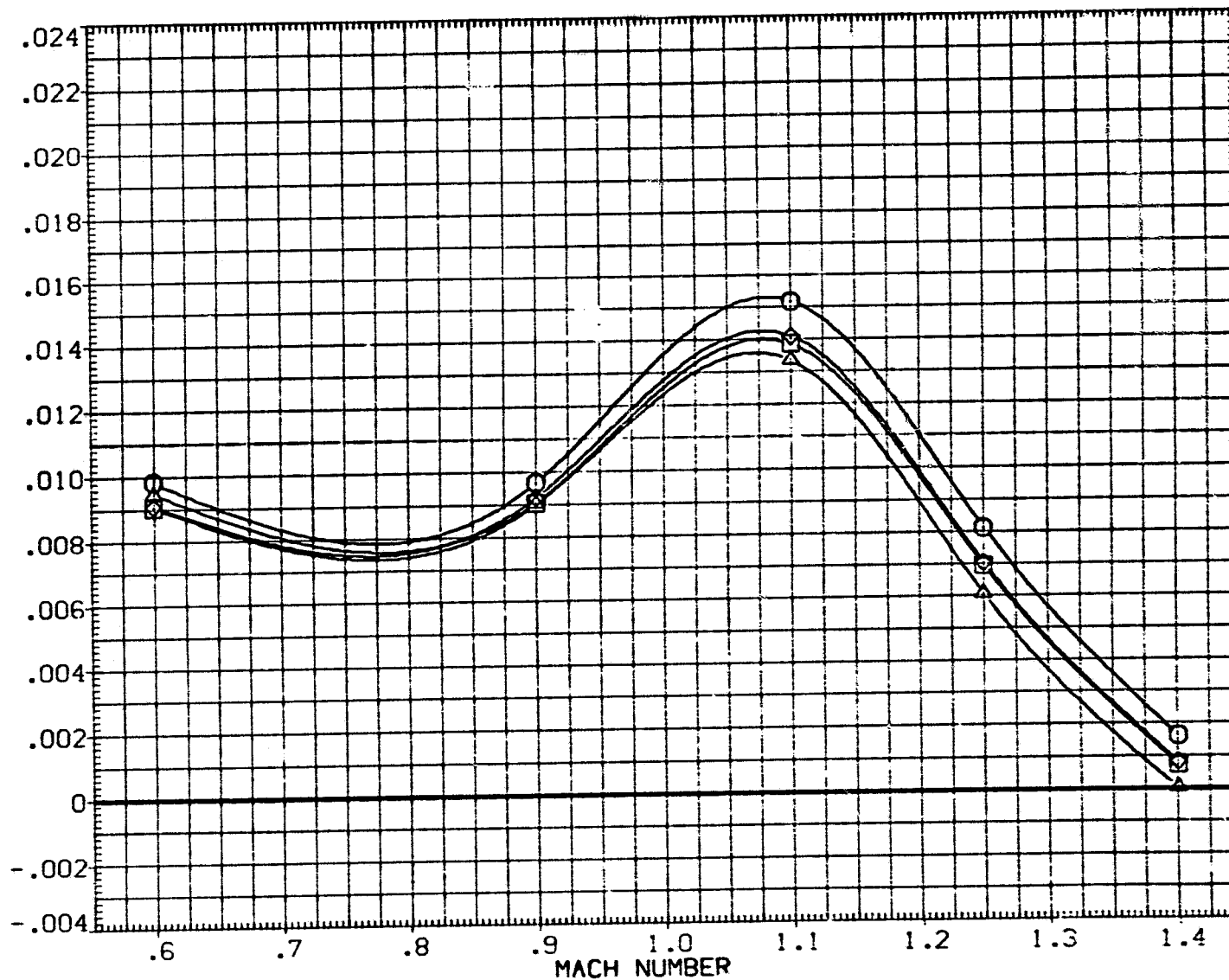


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-18	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.000	ALPHA .000 BETA 4.000	SREF 2690.0000 SQ.FT.
□	.000	ELV-08 .000 RN/L 3.460	LREF 1290.3000 IN.
◇	.000		BREF 1290.3000 IN.
△	.000		XMRP .0000 IN.
			YMRP .0000 IN.
			ZMRP .0000 IN.
			SCALE .0200

WING-ROOT TORSIONAL-MOMENT COEFFICIENT, CTMW

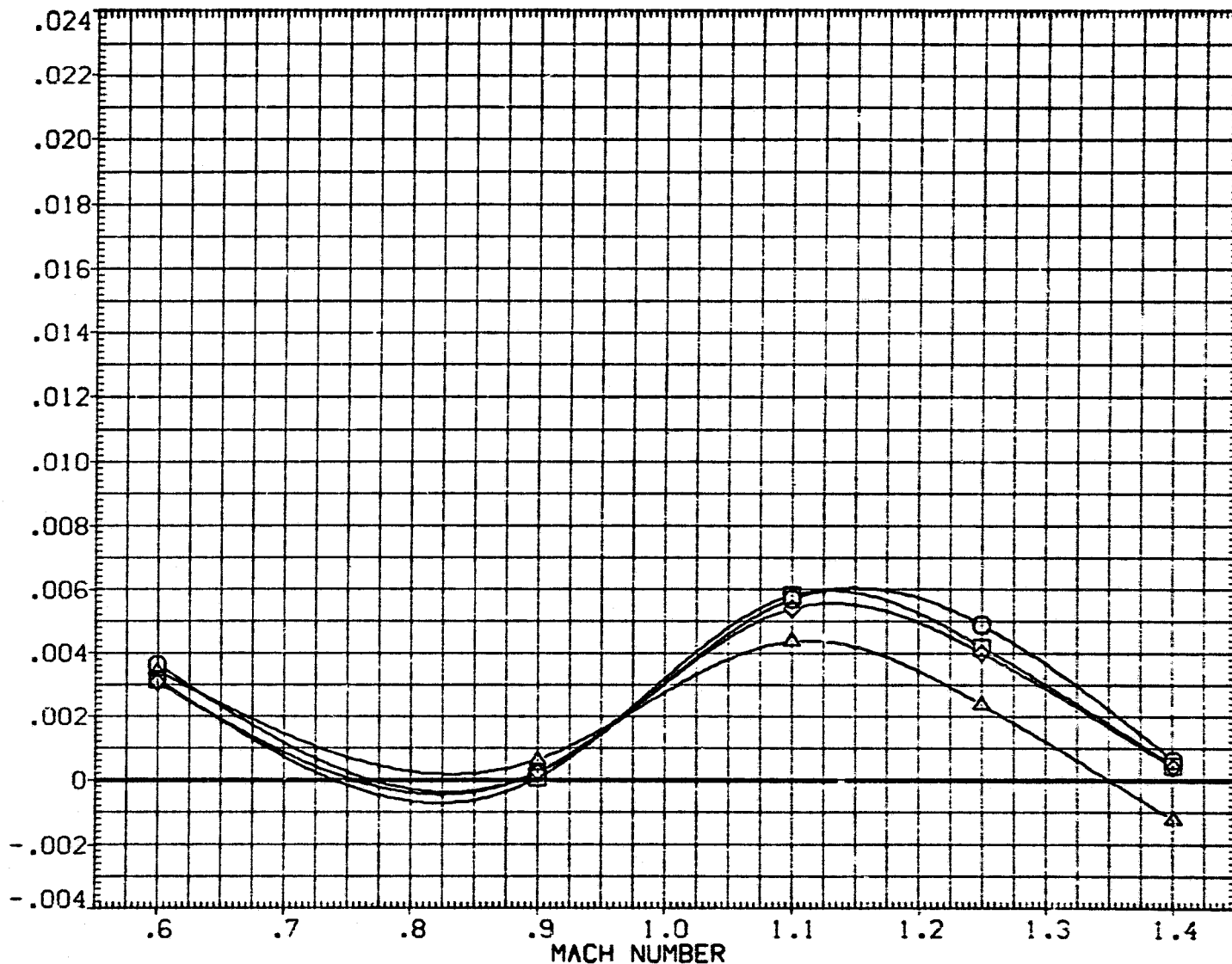


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-18	ALPHA	PARAMETRIC VALUES	BETA	-4.000	REFERENCE INFORMATION	SO.FT.
○	.000	ELV-08	.000	RN/L	3.400	SREF	2690.0000
□	.000					LREF	1290.3000
◇	.000					BREF	1290.3000
△	.000					XMRP	.0000
						YMRP	.0000
						ZMRP	.0000
						SCALE	.0200

WING NORMAL-FORCE COEFFICIENT, CNW

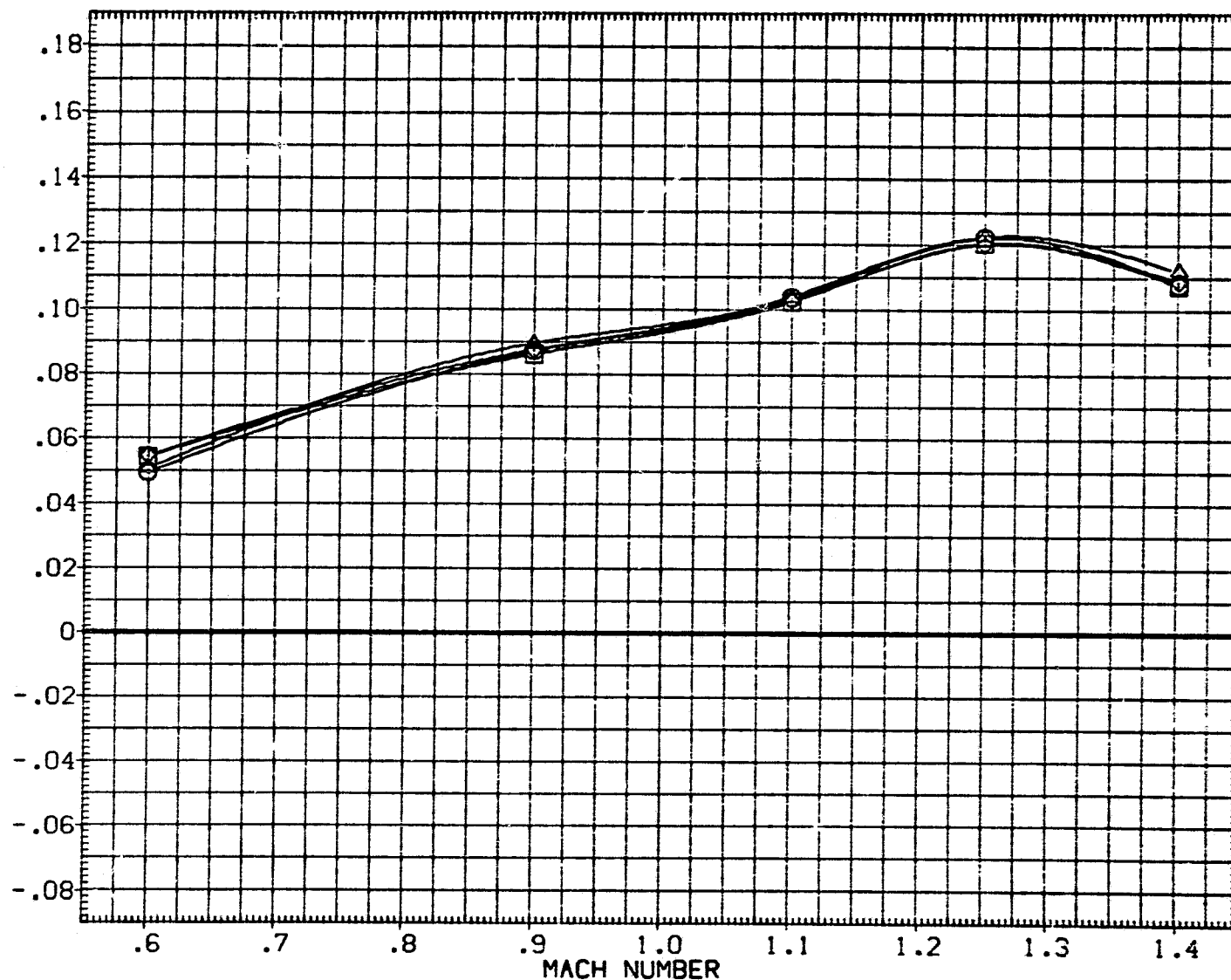


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL
○
□
◇
△

ELV-1B
.000
.000
.000
.000

ALPHA
ELV-0B

PARAMETRIC VALUES

.000 BETA .000
.000 RN/L 3.400

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
LREF 1290.3000 IN.
BREF 1290.3000 IN.
XMRP .0000 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0200

WING NORMAL-FORCE COEFFICIENT, CNW

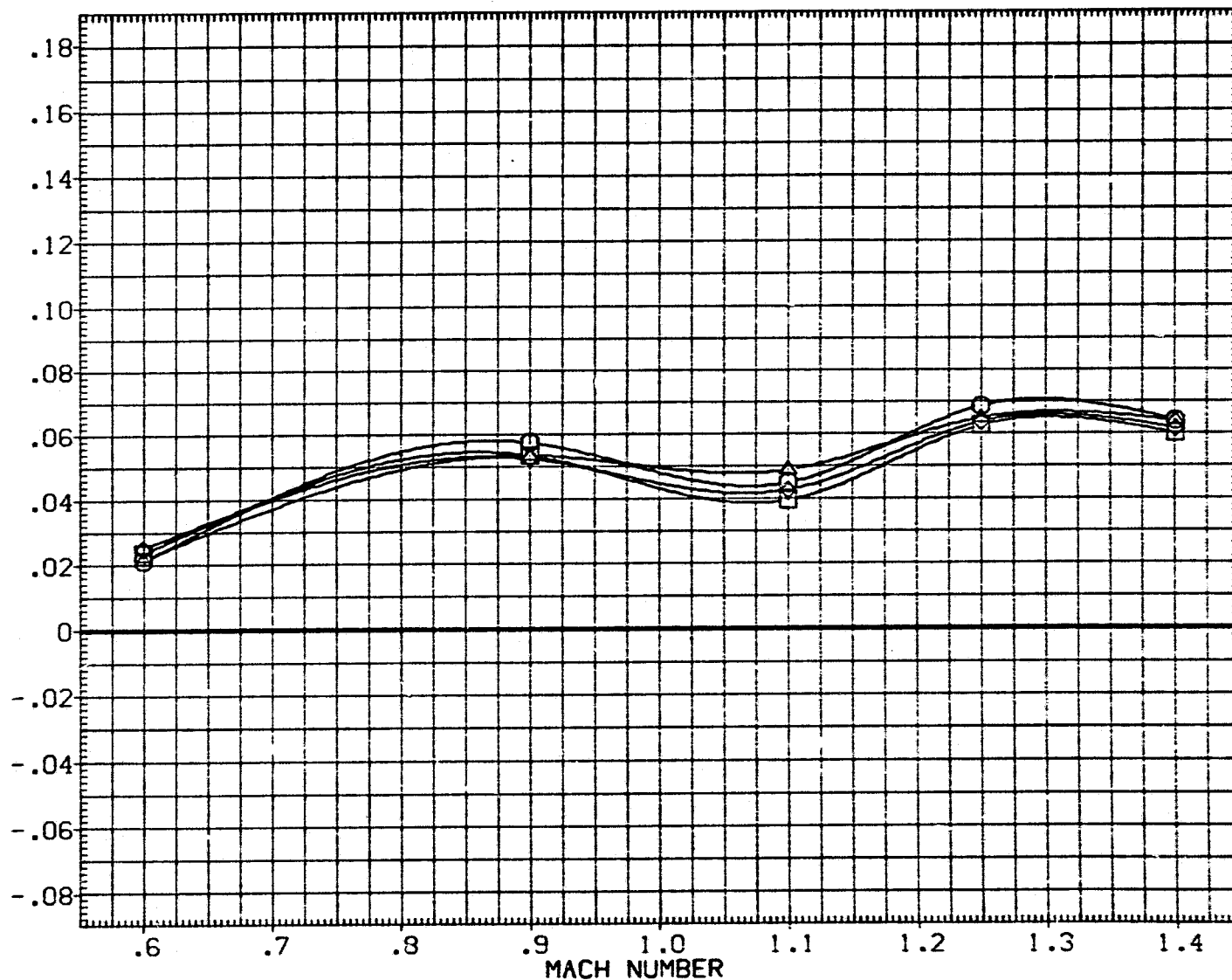


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-18	ALPHA	PARAMETRIC VALUES	BETA	4.000	REFERENCE INFORMATION	SREF	2690.0000	50.FT.
○	.000	ELV-08	.000	RN/L	3.400	LREF	1290.3000	IN.	
□	.000					BREF	1290.3000	IN.	
◇	.000					XMRP	.0000	IN.	
△	.000					YMRP	.0000	IN.	
						ZMRP	.0000	IN.	
						SCALE	.0200		

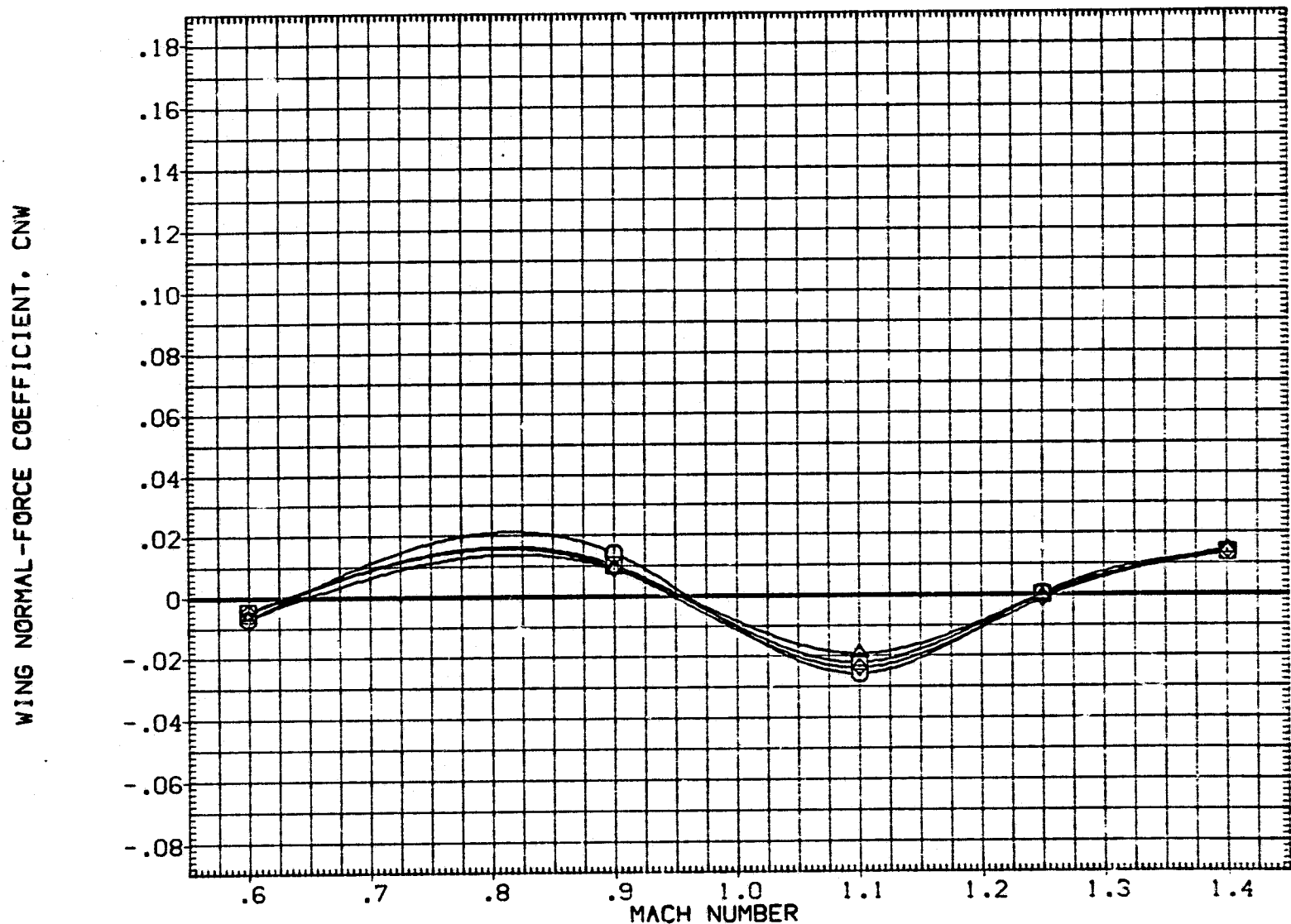


FIG. 118 EFFECT OF SSME PLUME SIZE ON WING LOADS

SYMBOL	ELV-18	ALPHA	PARAMETRIC VALUES	BETA
○	.000	-4.000		.000
□	.000	ELV-08	.000	RN/L
◇	.000			3.400
△	.000			

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

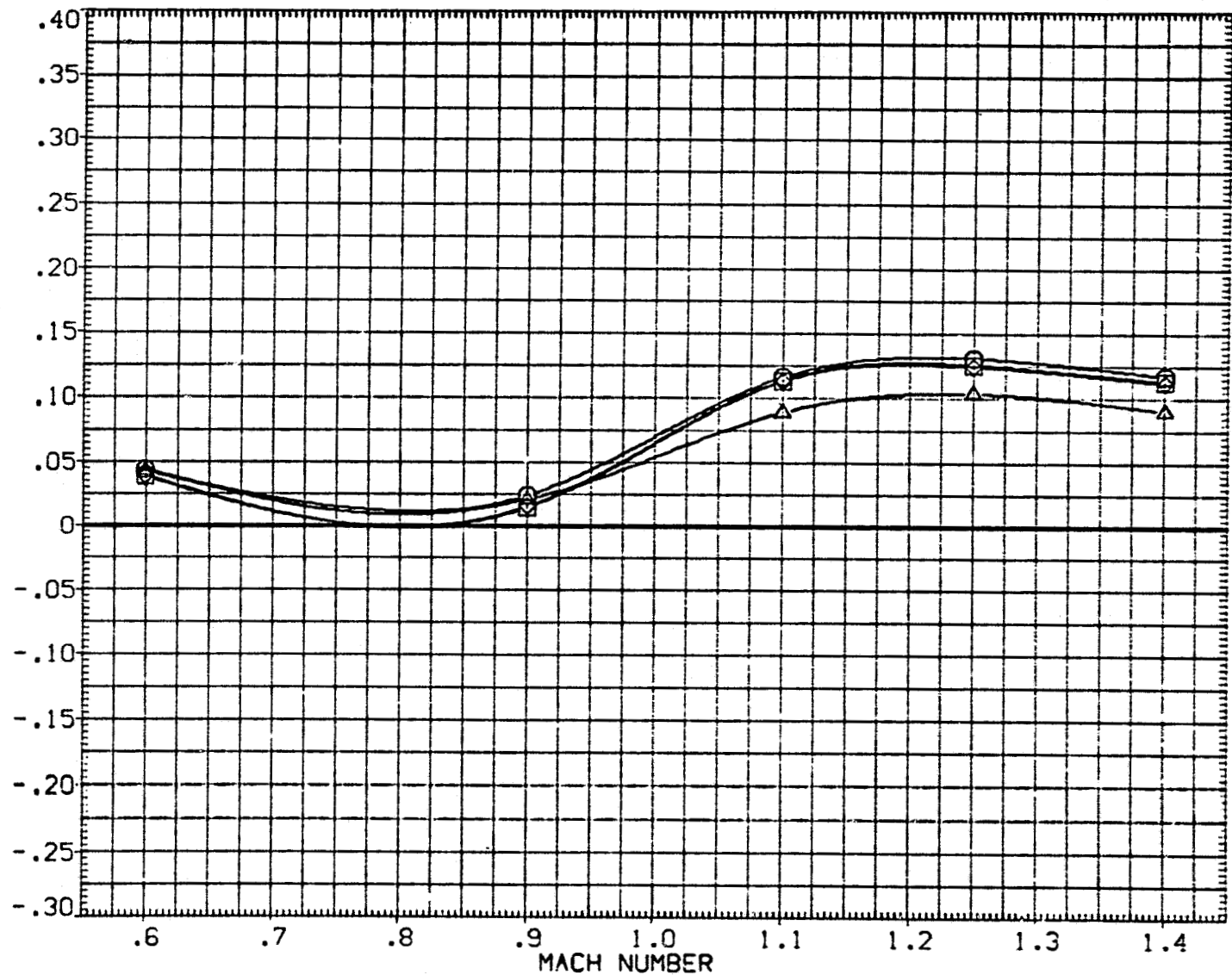


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4X28)

SYMBOL	ELV-18	PARAMETRIC VALUES			
○	.000	ALPHA	.000	BETA	.000
□	.000	ELV-08	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR INBOARD ELEVON, CHEI

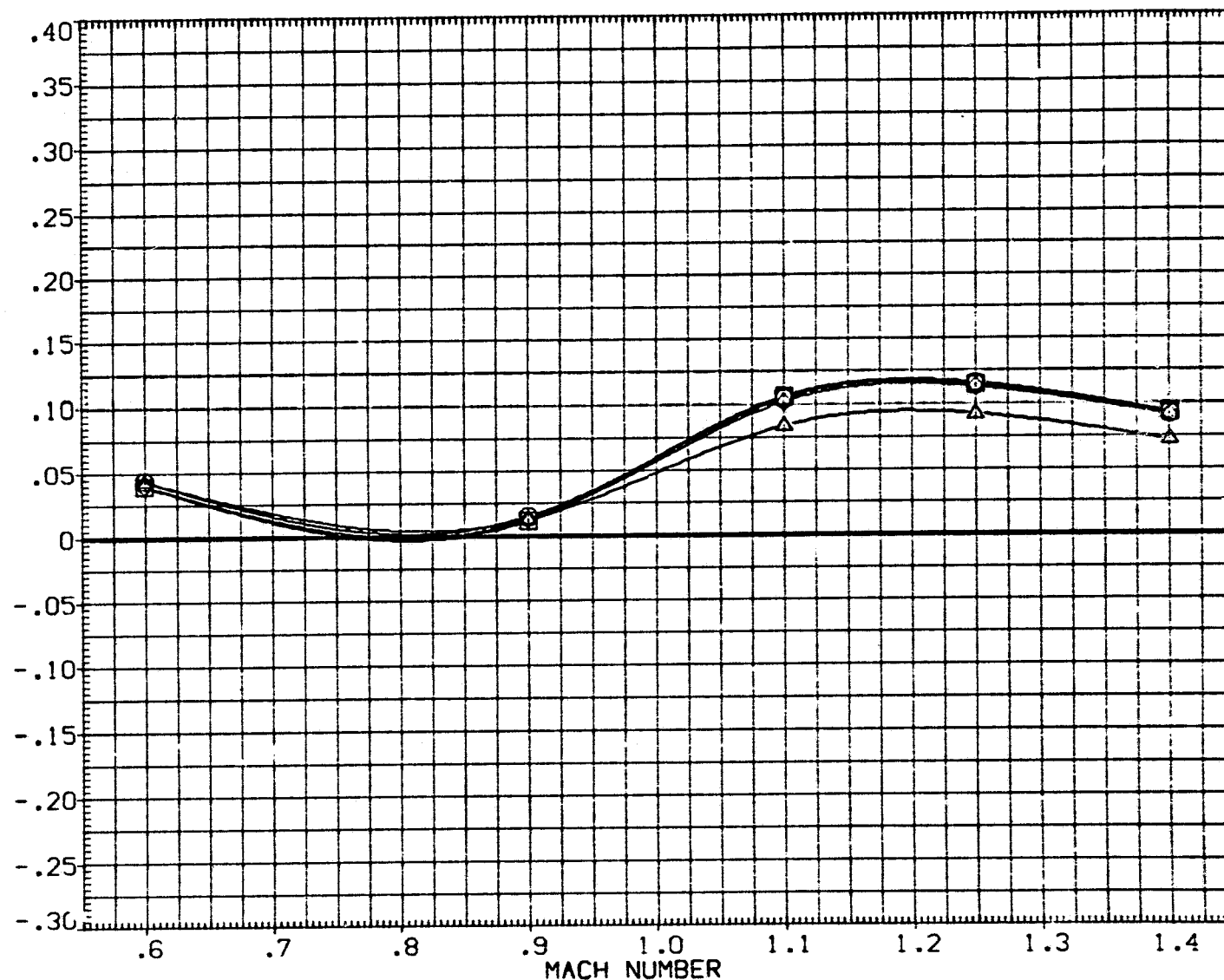


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	
○	.000	4.000		.000	
□	.000	ELV-0B	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

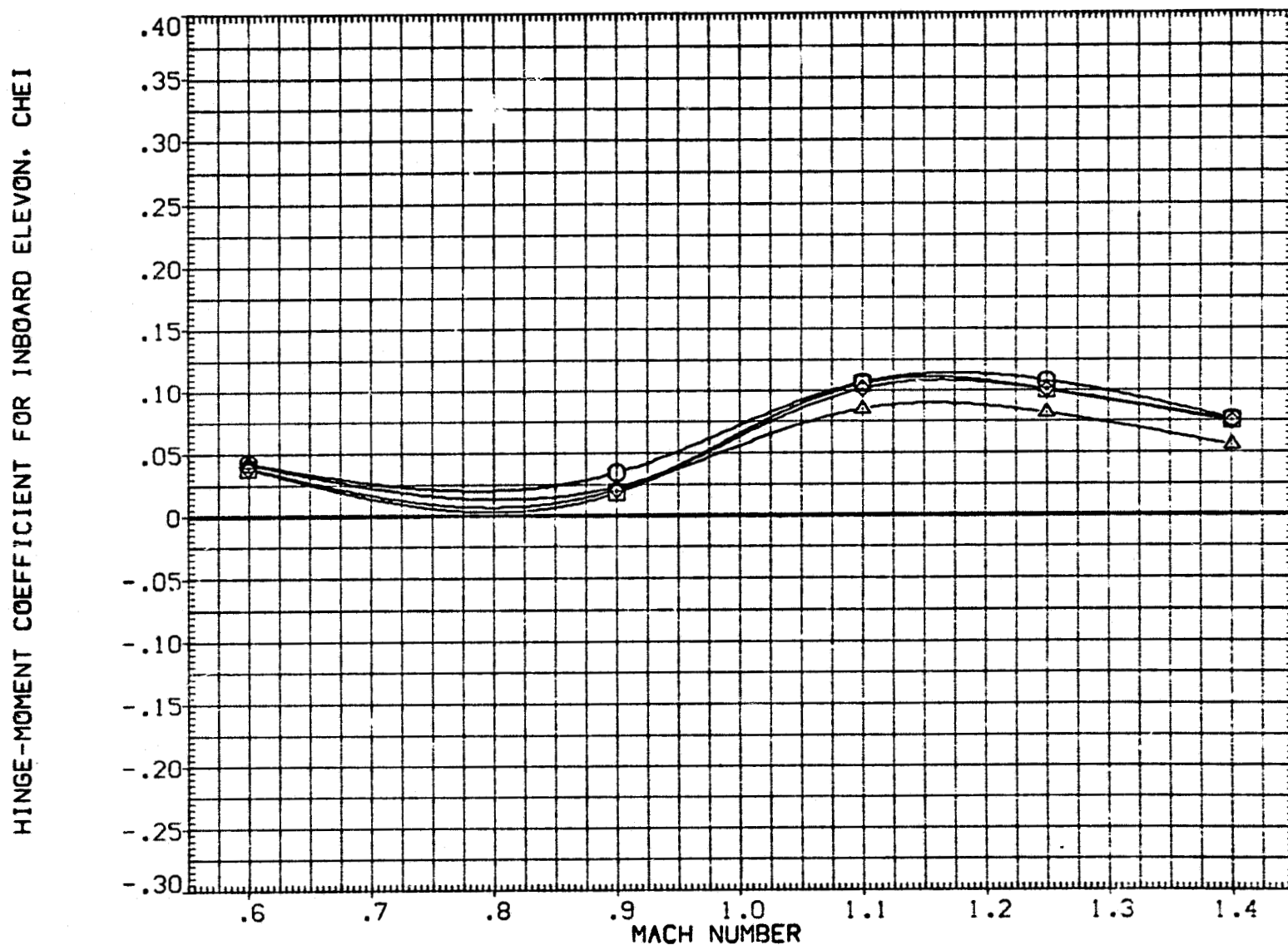


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF) (RE4X28)

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES		BETA
○	.000	-4.000			.000
□	.000	ELV-0B	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

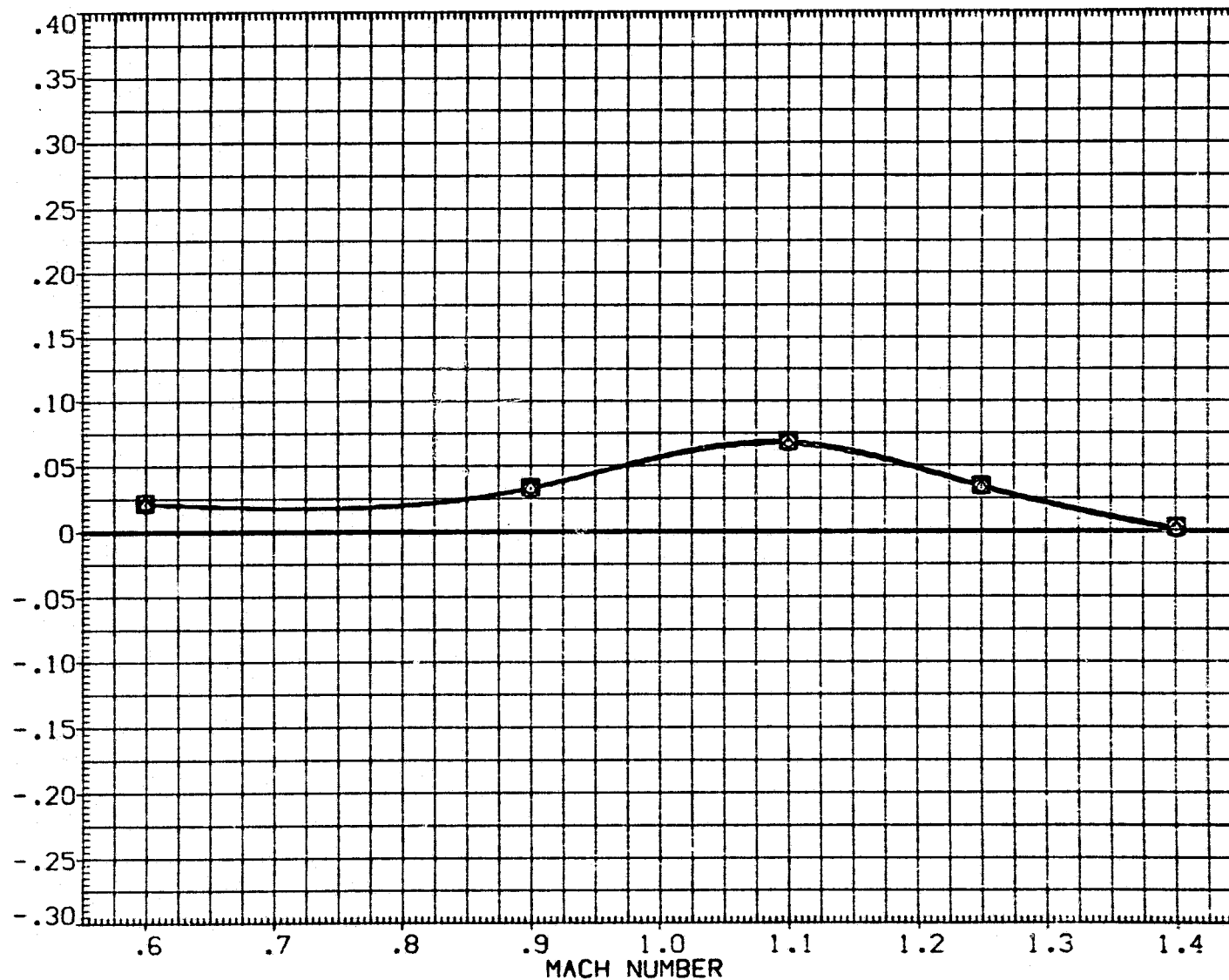


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

SYMBOL

○
□
◇
△

ELV-1B

.000

.000

.000

.000

ALPHA

ELV-0B

PARAMETRIC VALUES

.000

.000

.000

.000

BETA

RN/L

.000

3.400

REFERENCE INFORMATION

SREF

2690.0000

SQ.FT.

LREF

1290.3000

IN.

BREF

1290.3000

IN.

XMRP

.0000

IN.

YMRP

.0000

IN.

ZMRP

.0000

IN.

SCALE

.0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

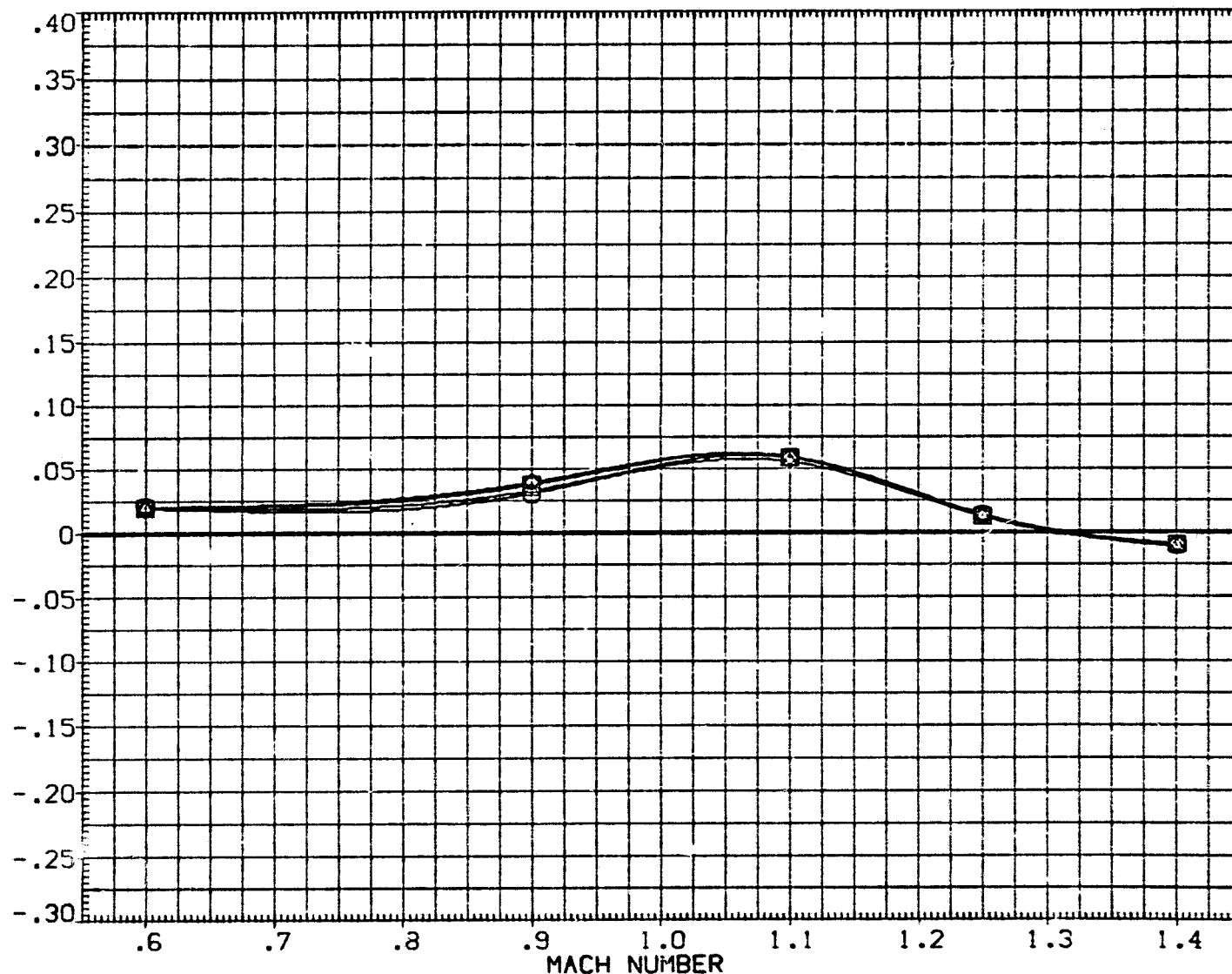


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4X28)

SYMBOL	ELV-18	PARAMETRIC VALUES			
○	.000	ALPHA	4.000	BETA	.000
□	.000	ELV-08	.000	RN/L	3.400
◇	.000				
△	.000				

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON. CHEO

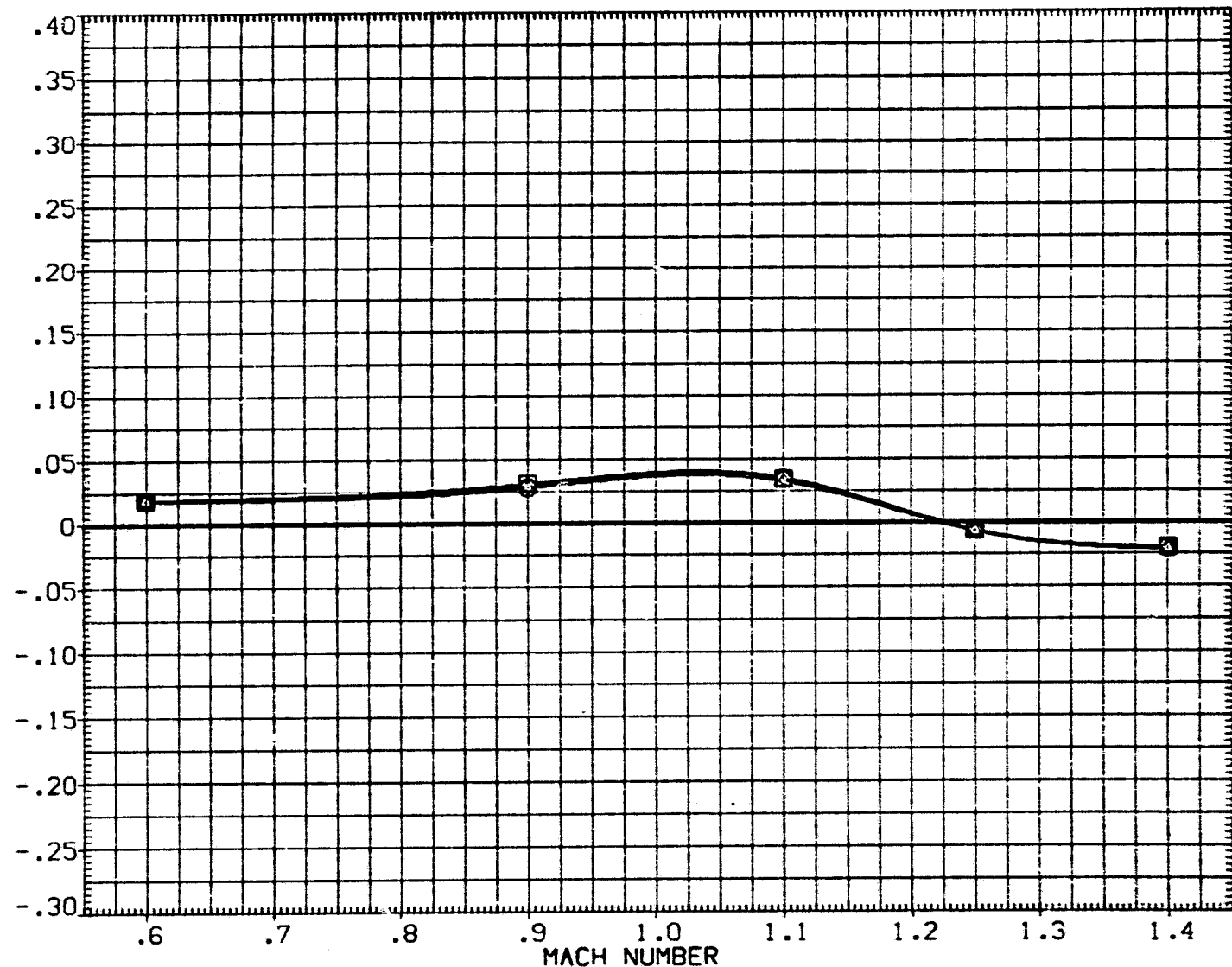


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

SYMBOL	ELV-18	PARAMETRIC VALUES
○	.000	ALPHA .000 BETA -4.000
□	.000	ELV-08 .000 RN/L 3.400
◇	.000	
△	.000	

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

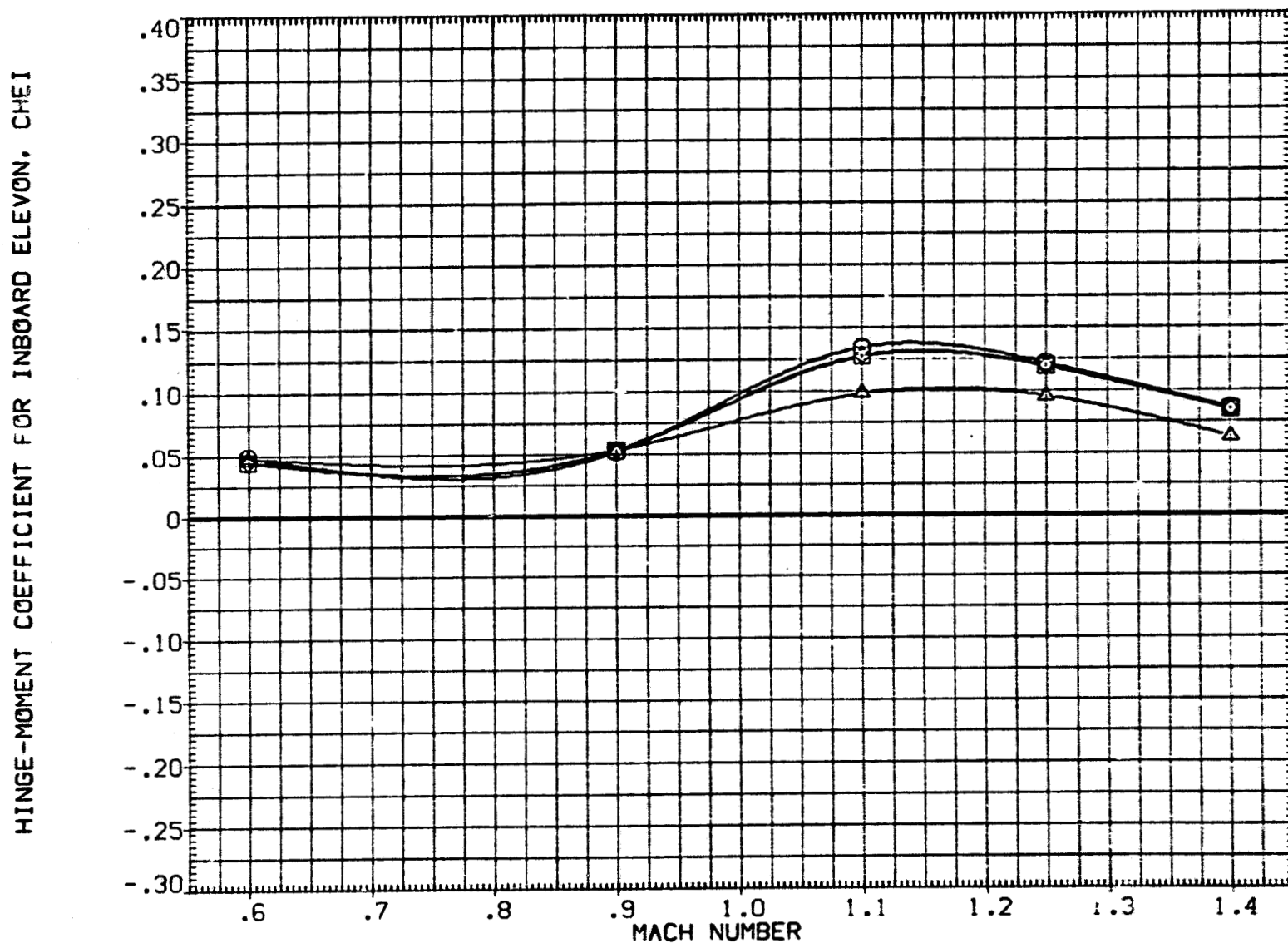


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	REFERENCE INFORMATION
○	.000		.000	.000	SREF 2690.0000 SQ.FT.
□	.000	ELV-0B	.000	3.400	LREF 1290.3000 IN.
◇	.000				BREF 1290.3000 IN.
△	.000				XMRP .0000 IN.
					YMRP .0000 IN.
					ZMRP .0000 IN.
					SCALE .0200

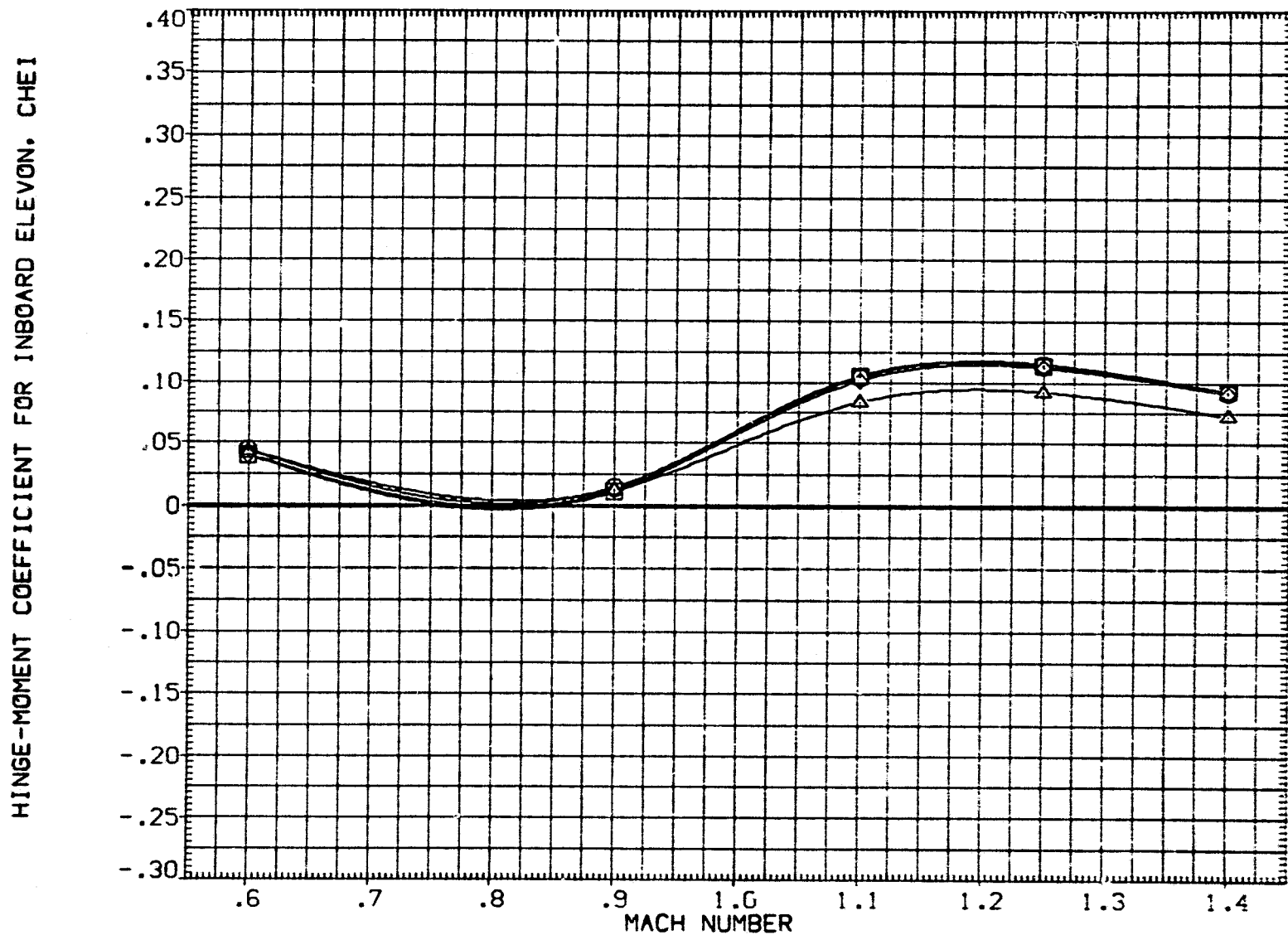


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

SYMBOL	ELV-18	PARAMETRIC VALUES	REFERENCE INFORMATION
○	.000	ALPHA .000 BETA 4.000	SREF 2690.0000 SQ.FT.
□	.000	ELV-08 .000 RN/L 3.400	LREF 1290.3000 IN.
◇	.000		BREF 1290.3000 IN.
△	.000		XMRP .0000 IN.
			YMRP .0000 IN.
			ZMRP .0000 IN.
			SCALE .0200

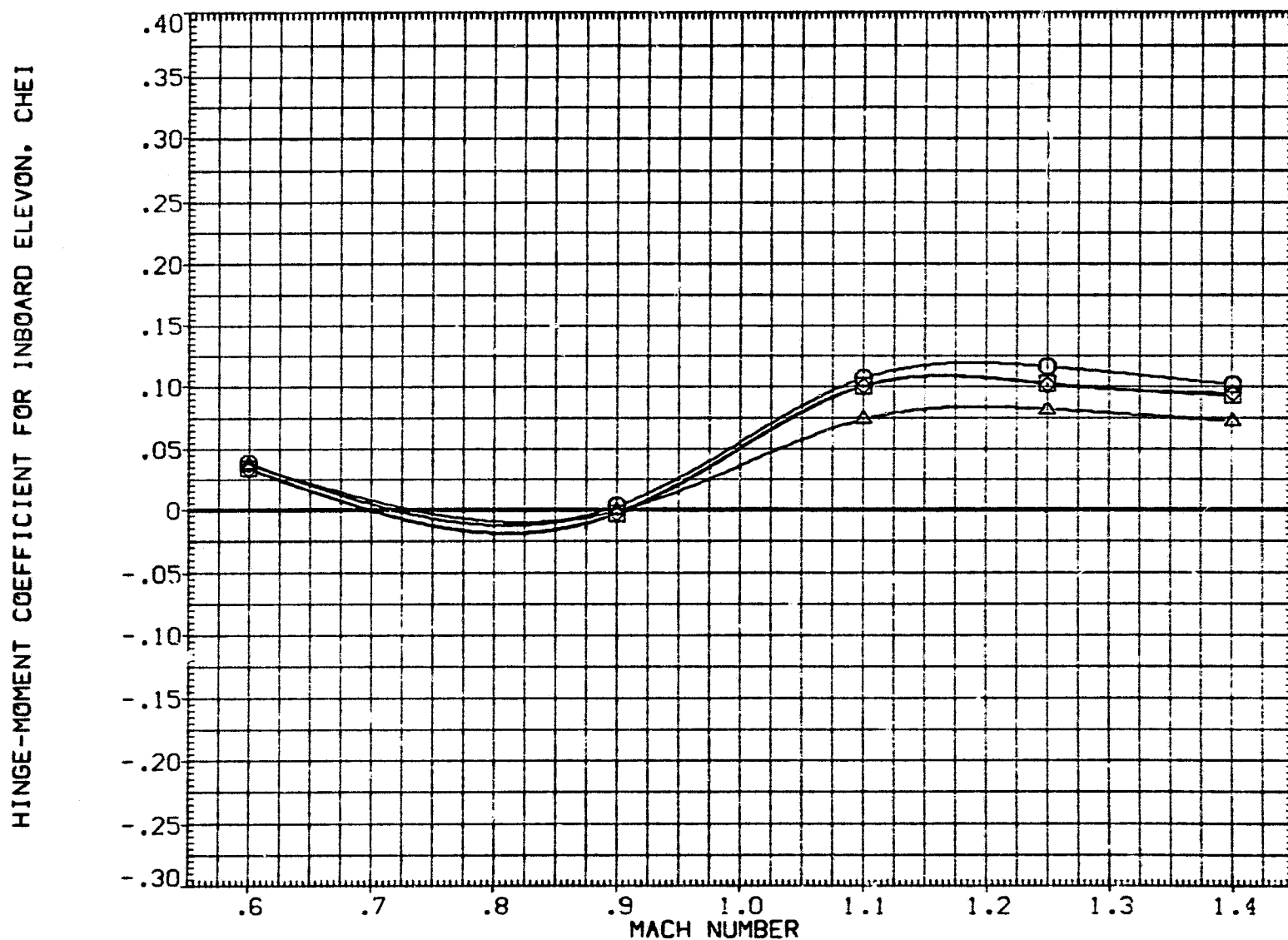


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-18	PARAMETRIC VALUES		
○	.000	ALPHA	.000	BETA -4.000
□	.000	ELV-08	.000	RN/L 3.400
◇	.000			
△	.000			

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

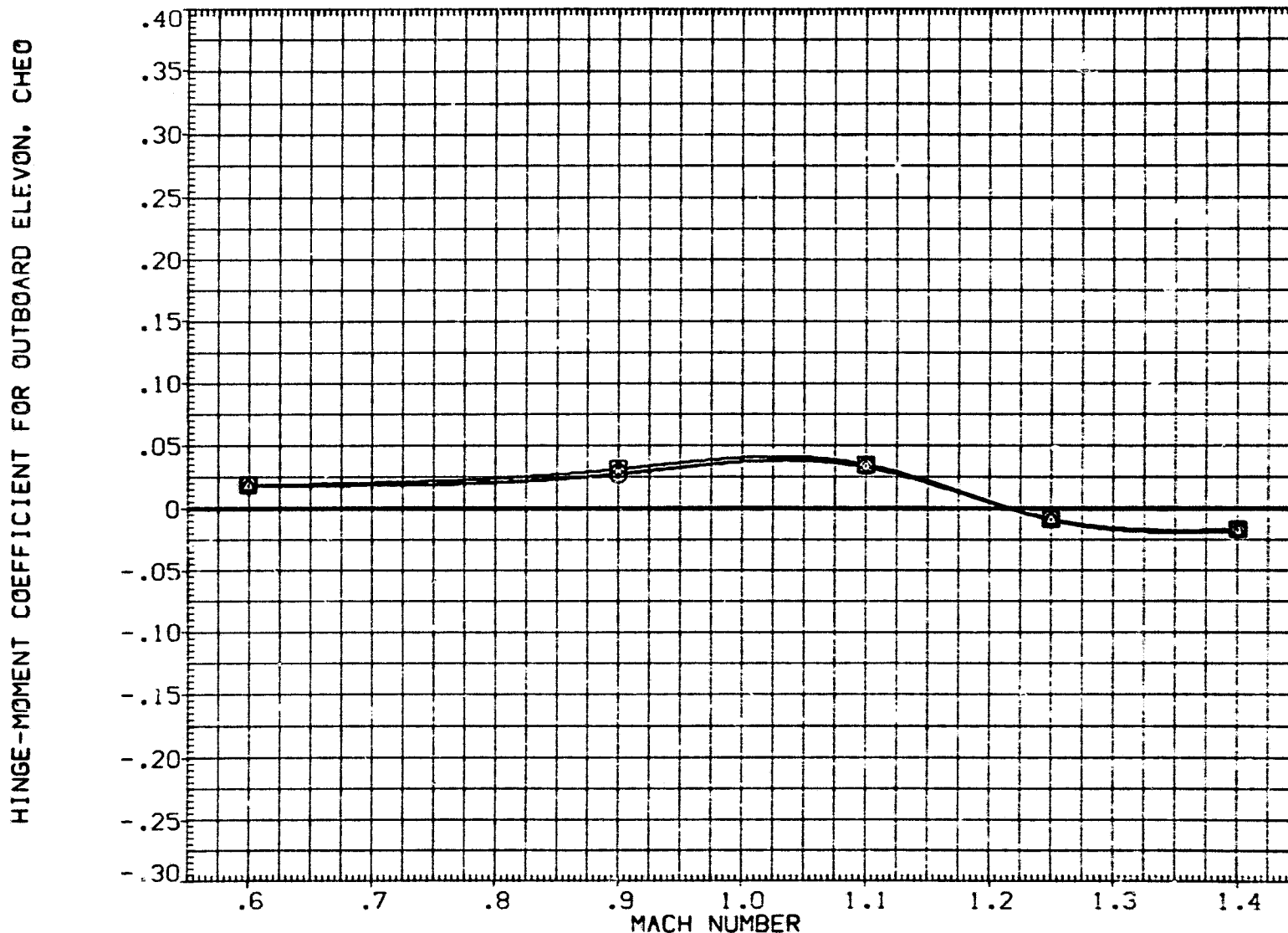


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

SYMBOL	ELV-1B	ALPHA	PARABOLIC VALUES	BETA	REFERENCE INFORMATION
○	.000	ELV-0B	.000	.000	SREF 2690.0000 SQ.FT.
□	.000		.000	3.400	LREF 1290.3000 IN.
◇	.000				BREF 1290.3000 IN.
△	.000				XMRP .0000 IN.
					YMRP .0000 IN.
					ZMRP .0000 IN.
					SCALE .0200

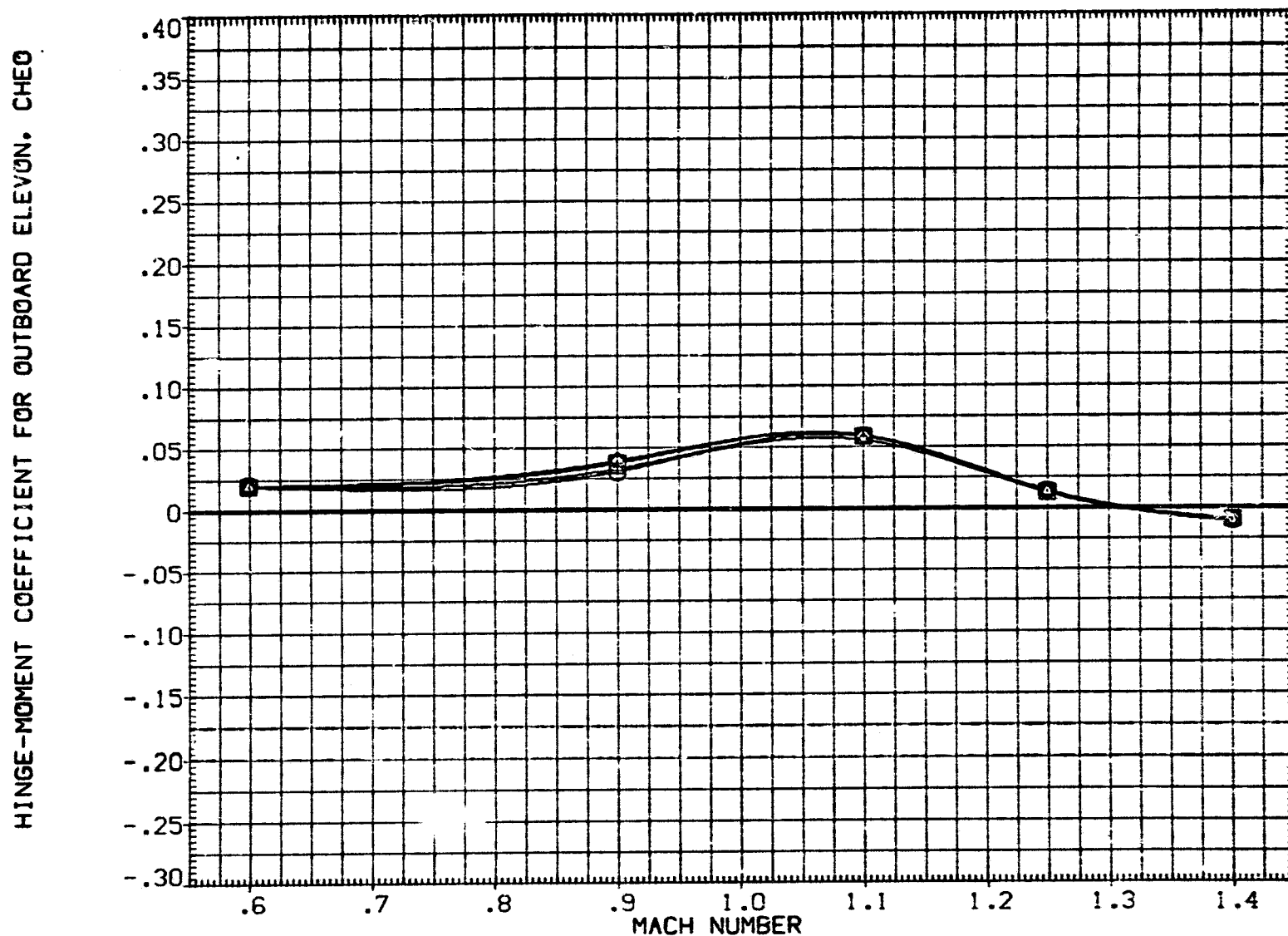


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF) (RE4Y28)

SYMBOL	ELV-1B	ALPHA	PARAMETRIC VALUES	BETA	4.000	REFERENCE INFORMATION
○	.000	ELV-0B	.000	RN/L	3.400	SREF 2690.0000 SQ.FT.
□	.000					LREF 1290.3000 IN.
◇	.000					BREF 1290.3000 IN.
△	.000					XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

HINGE-MOMENT COEFFICIENT FOR OUTBOARD ELEVON, CHEO

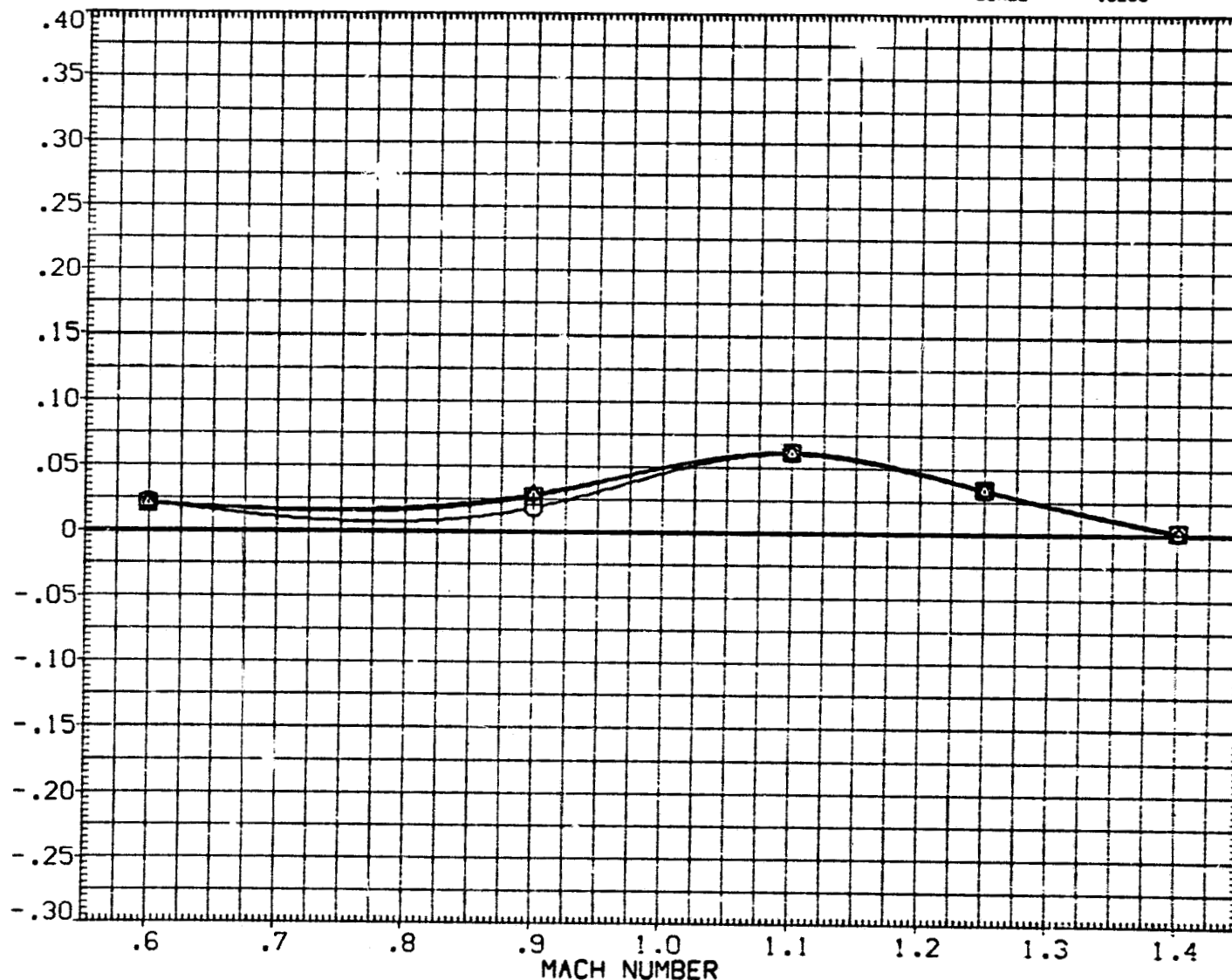


FIG. 119 EFFECT OF SSME PLUME SIZE ON ELEVON HINGE MOMENT

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(EE4N20)	ARC 11-023 1A6 JTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(EE4N25)	ARC 11-023 1A20 JTS (SRB NOM-) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(EE4N06)	ARC 11-023 1A20 JTS (SRB NOM+) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(EE4N01)	ARC 11-023 1A20 JTS (SRB NOM++) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL LONGITUDINAL LOCATION OF WING CENTER-OF-PRESSURE. DXWCP, IN

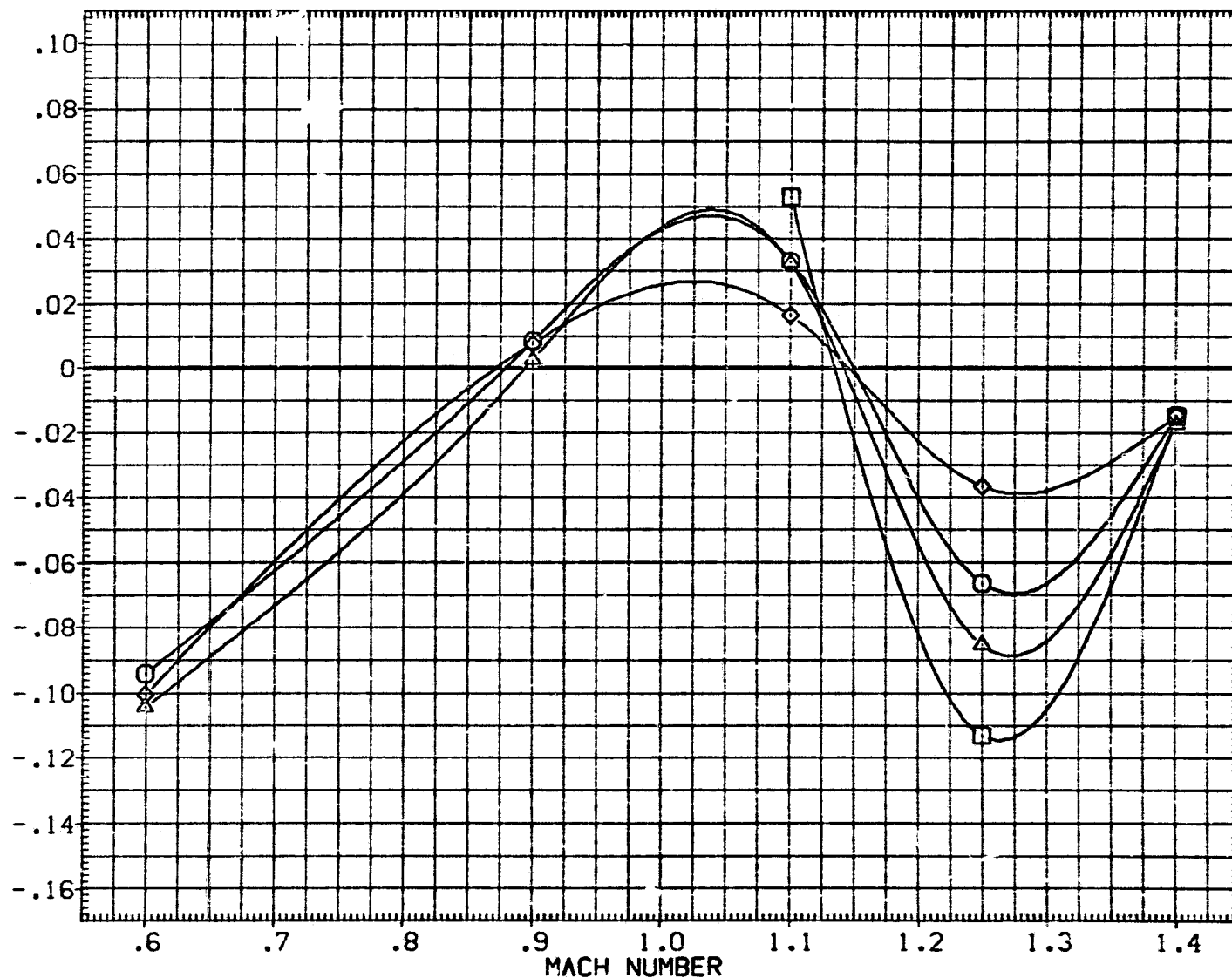


FIG. 120 SUMMARY, SRB PLUME EFFECTS ON WING CENTER OF PRESSURE
(A) BETA = .00

INCREMENTAL LATERAL LOCATION OF WING CENTER-OF-PRESSURE, DYWCP, IN.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(EE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(EE4N25)	ARC 11-023 1A80 OTS (SRB NOM-) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(EE4N06)	ARC 11-023 1A80 OTS (SRB NOM+) (SSME NOM)	.000	.000	.000	BREF	1290.3000 IN.
(EE4N01)	ARC 11-023 1A80 OTS (SRB NOM++) (SSME NOM)	.000	.000	.000	XMRP	.0000 IN.
					YMRP	.0000 IN.
					ZMRP	.0000 IN.
					SCALE	.0200

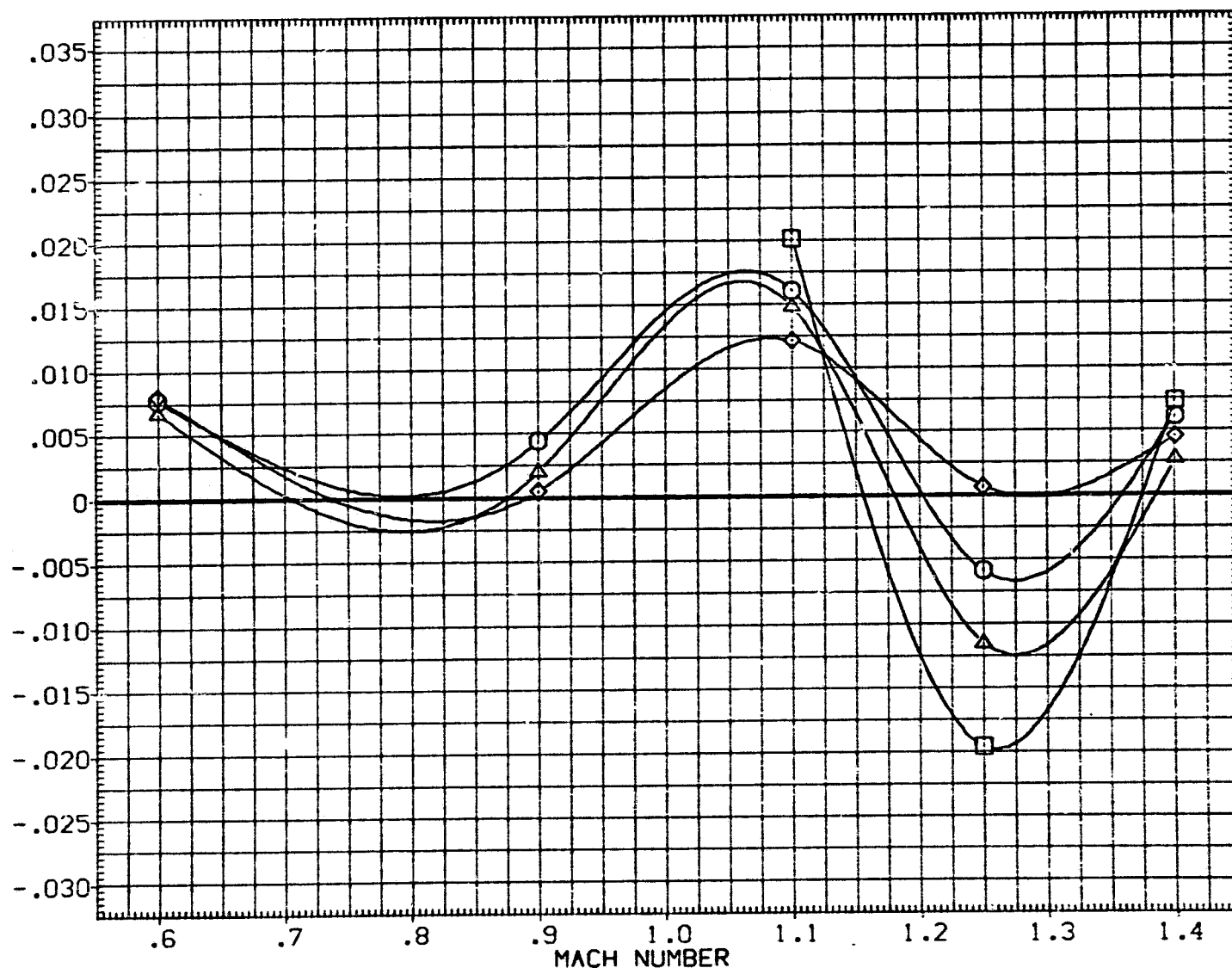


FIG. 120 SUMMARY, SRB PLUME EFFECTS ON WING CENTER OF PRESSURE
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(EE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	SREF	2697.0000	SQ.FT.
(EE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	LREF	1290.3000	IN.
(EE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	BREF	1290.3000	IN.
(EE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL LONGITUDINAL COEFFICIENT FOR VERTICAL-TAIL C/P. DXVCP. IN.

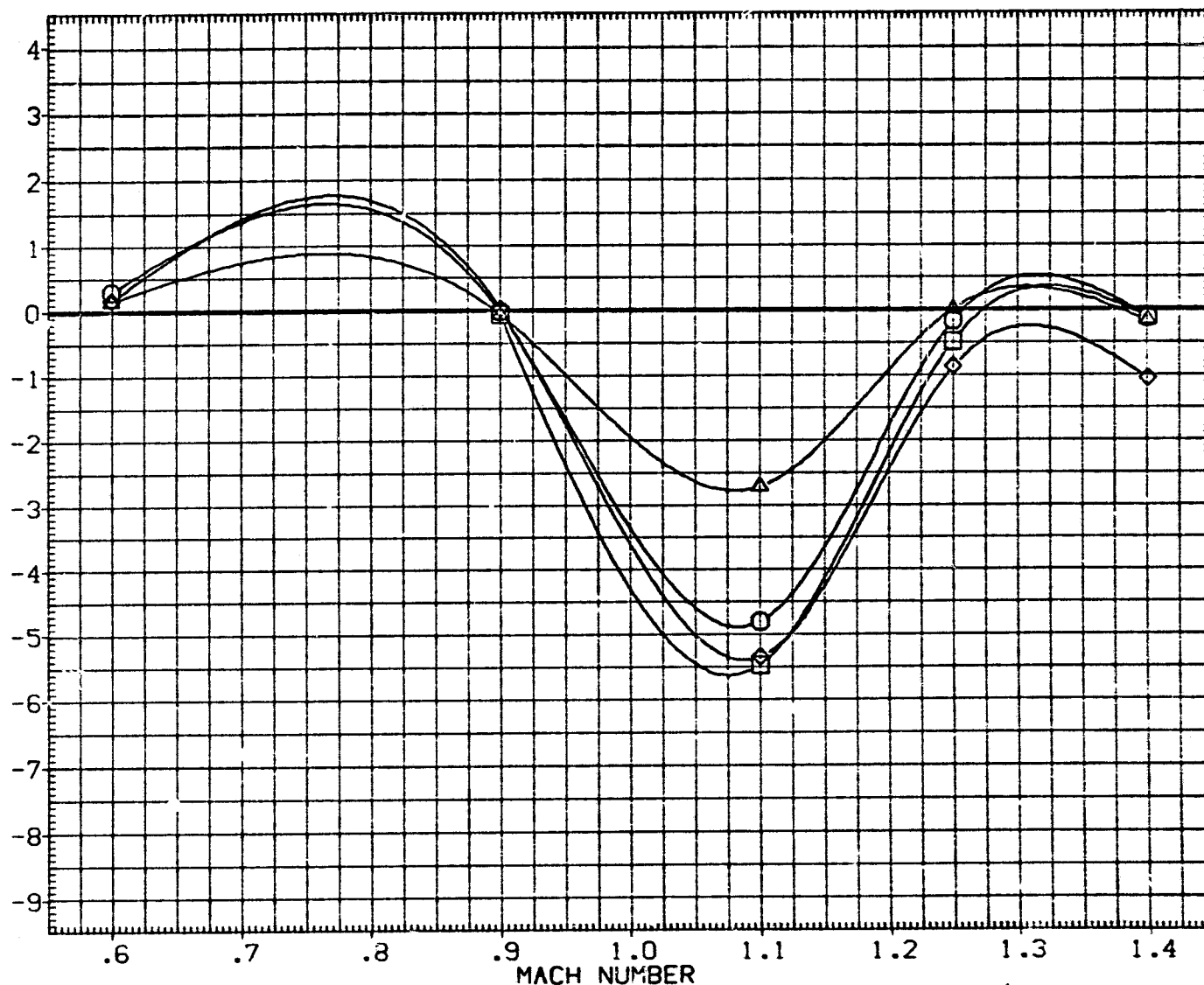


FIG. 121 SUMMARY, SSME PLUME EFFECTS ON VERTICAL TAIL CENTER OF PRESSURE

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(EE4N20)	ARC 11-023 1A80 OTS (SR3 NOM) (SSME NOM)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(EE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	LREF	1290.3000	IN.
(EE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	BREF	1290.3000	IN.
(EE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	XMRP	.0000	IN.
					YMRP	.0000	IN.
					ZMRP	.0000	IN.
					SCALE	.0200	

INCREMENTAL VERTICAL LOCATION OF VERTICAL-TAIL C/P, DZVCP, IN.

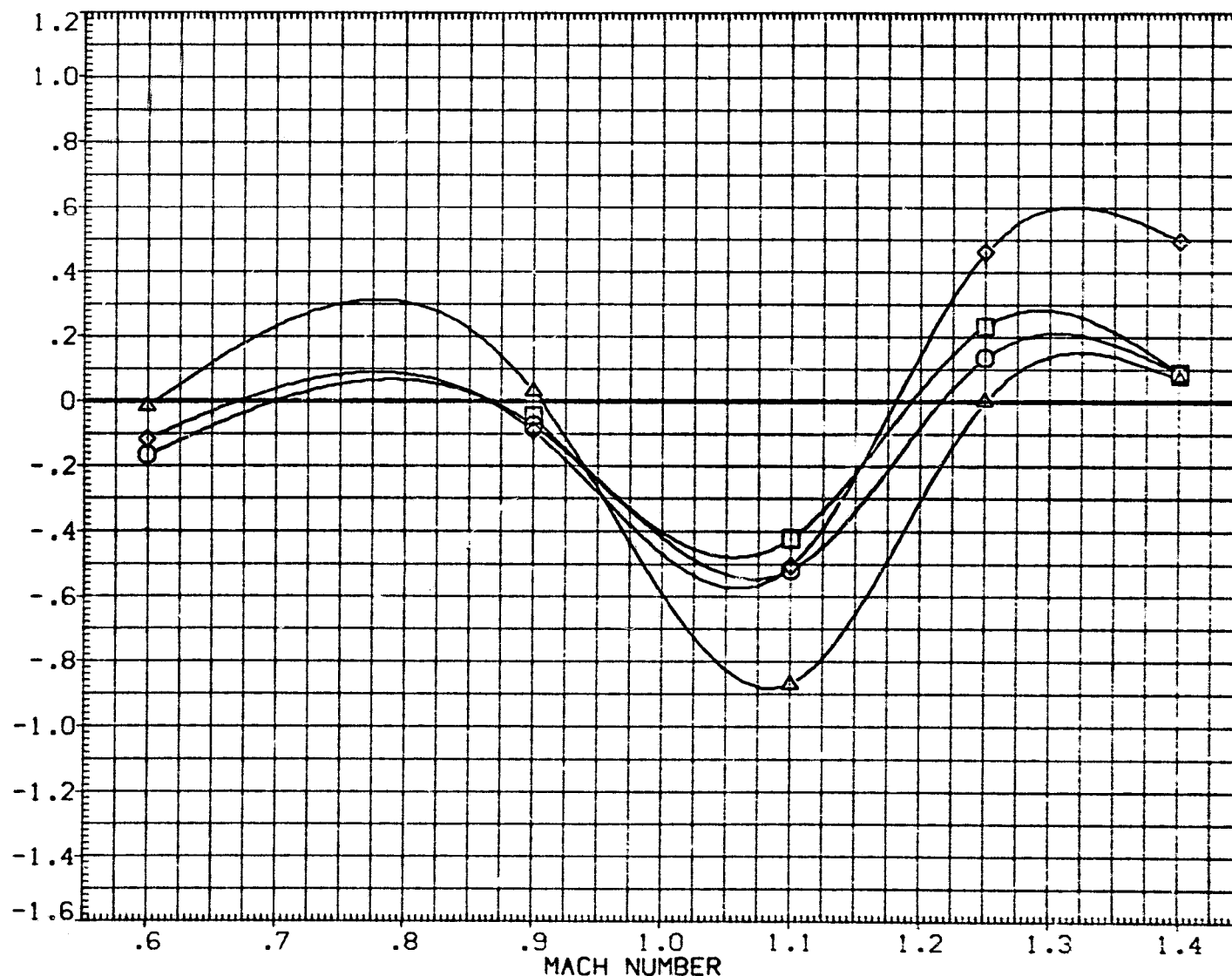


FIG. 121 SUMMARY, SSME PLUME EFFECTS ON VERTICAL TAIL CENTER OF PRESSURE

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(RE4049)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)
(RE4050)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)

ELV-1B	ELV-0B	ALPHA	RN/L
8.000	4.000	.000	4.250
8.000	4.000	.000	4.250

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	1290.3000 IN.
BREF	1290.3000 IN.
XMRP	.0000 IN.
YMRP	.0000 IN.
ZMRP	.0000 IN.
SCALE	.0200

WING-ROOT BENDING-MOMENT COEFFICIENT, CBMW

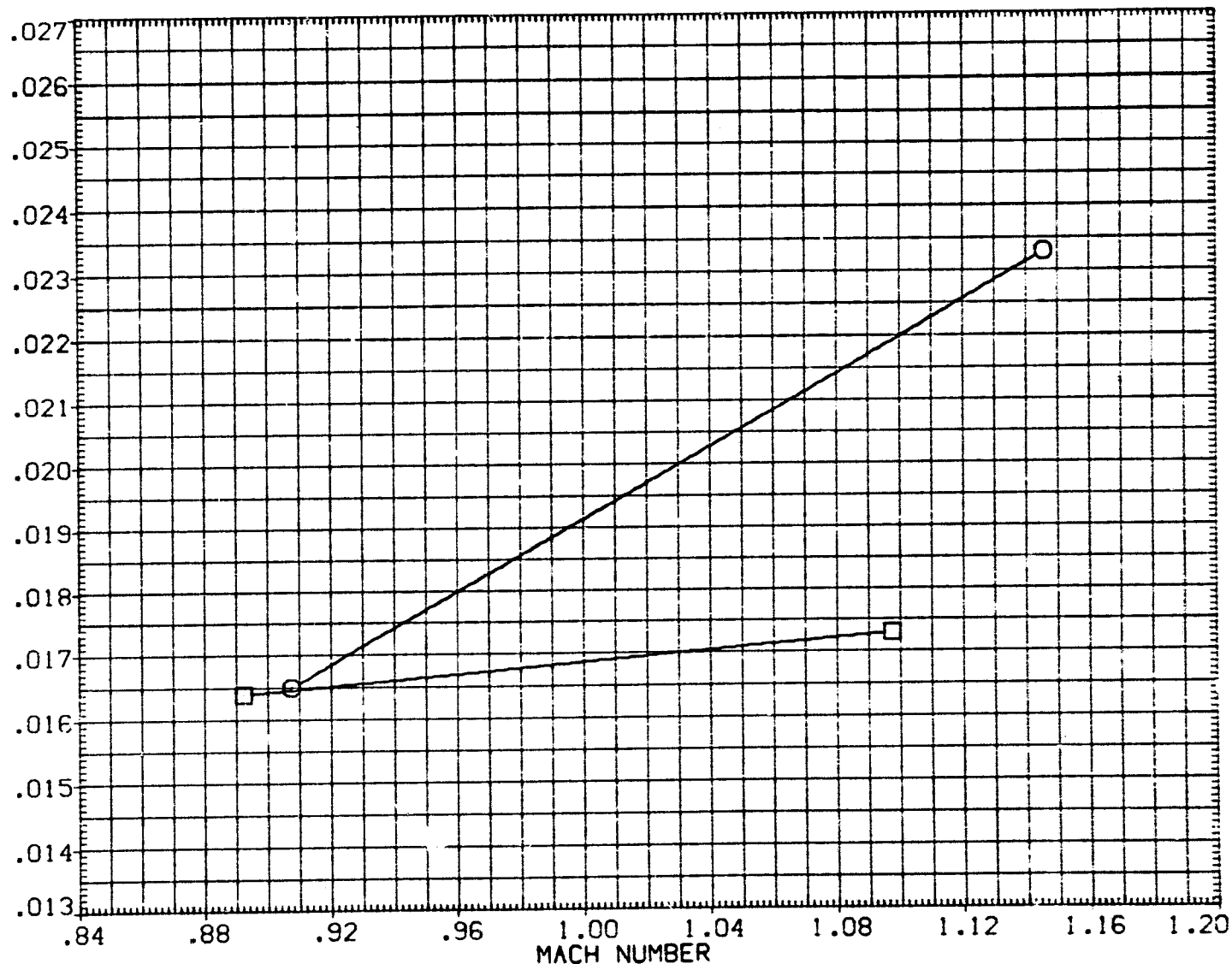


FIG. 122 SUMMARY, MACH RAMP MAXIMUM WING LOADS

(A) BETA = -.06

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	RN/L	REFERENCE INFORMATION	
(RE4049)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	4.250	SREF	2690.0000 SQ.FT.
(RE4050)	ARC 11-023 1A80 OTS (SRJ NOM) (SSME NOM)	8.000	4.000	.000	4.250	LREF	1290.3000 IN.
						BREF	1290.3000 IN.
						XMRP	.0000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0200

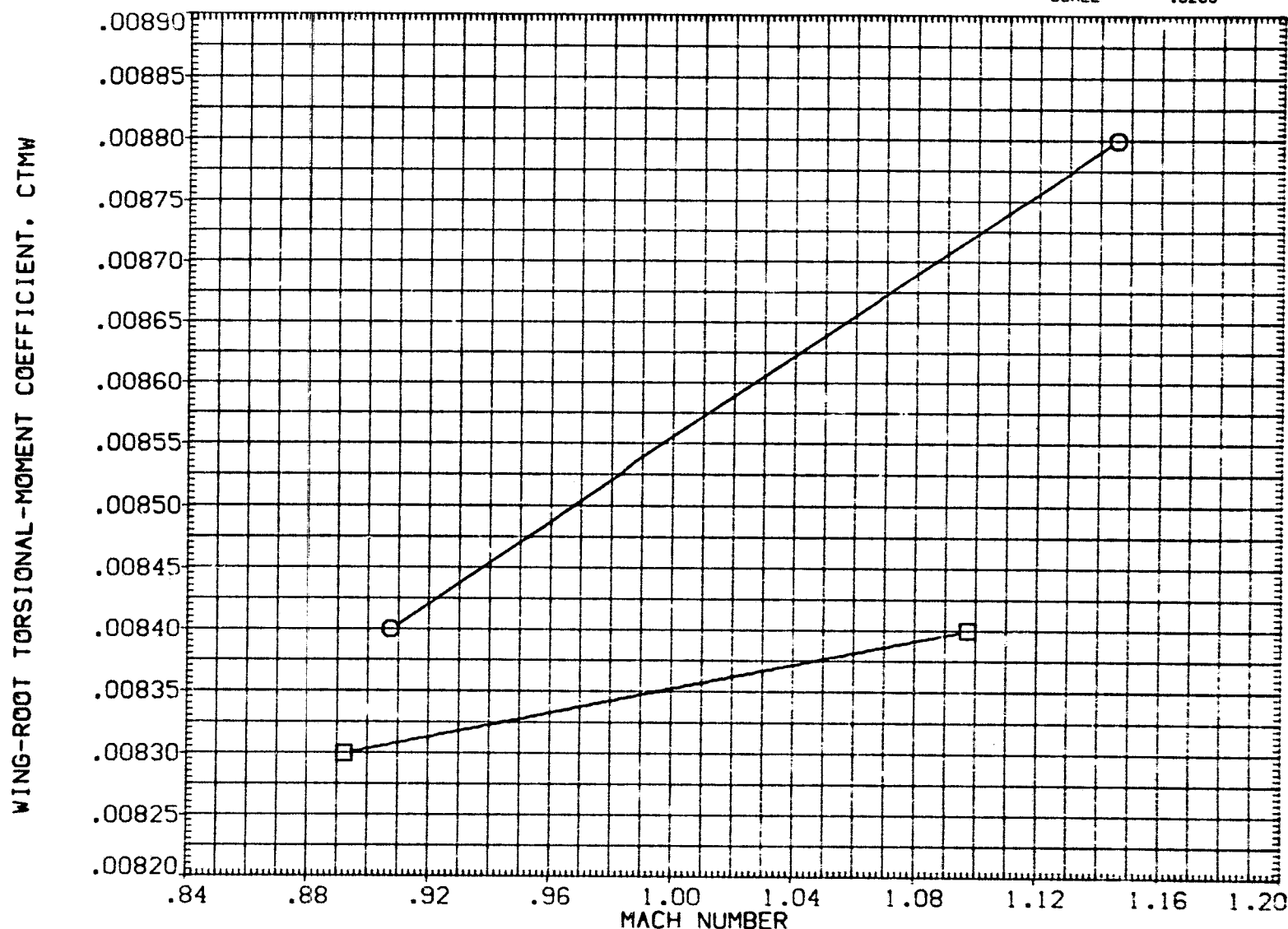


FIG. 122 SUMMARY, MACH RAMP MAXIMUM WING LOADS

(A) BETA = -.06

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	RN/L	REFERENCE INFORMATION
(RE4049)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	4.250	SREF 2690.0000 SQ.FT.
(RE4050)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	4.250	LREF 1290.3000 IN.
						BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

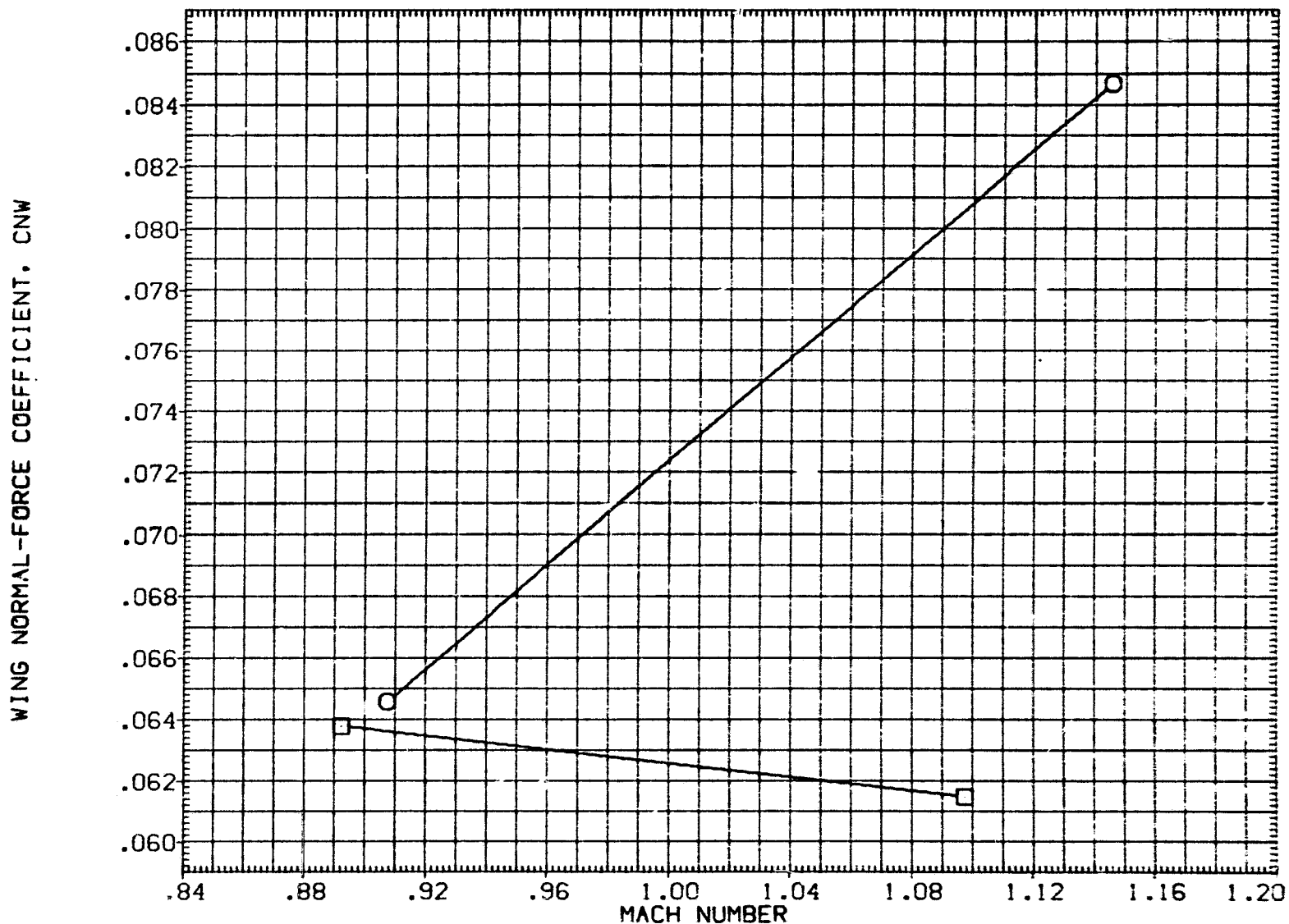


FIG. 122 SUMMARY, MACH RAMP MAXIMUM WING LOADS

(A) BETA = -.06

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	RN/L	REFERENCE INFORMATION
(RE4049)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	4.250	SREF 2690.0000 SQ.FT.
(RE4050)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	4.250	LREF 1290.3000 IN.
						BREF 1290.3000 IN.
						XMRP .0000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0200

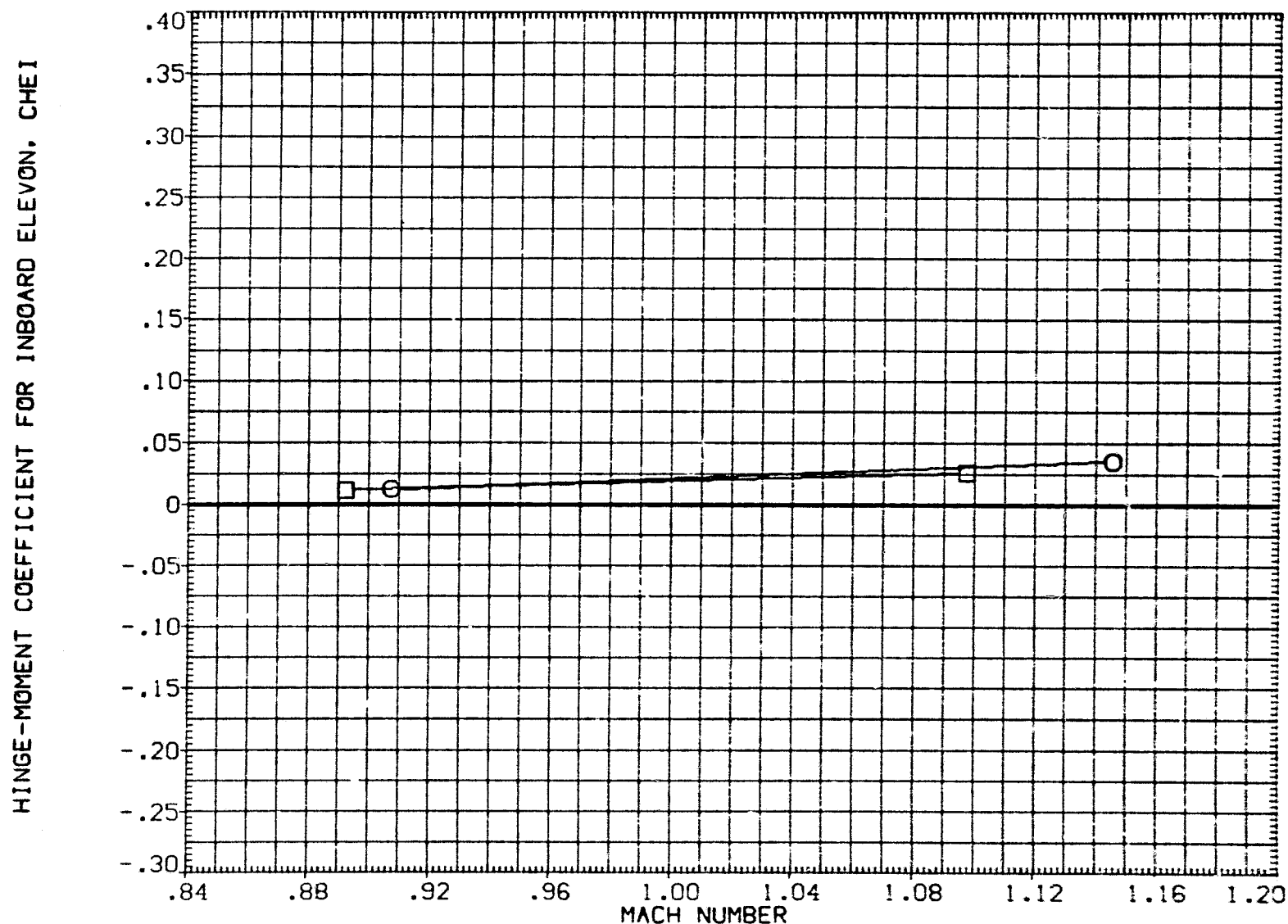


FIG. 123 SUMMARY, MACH RAMP MAXIMUM ELEVON HINGE MOMENTS
(A) BETA = -.06

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	RN/L	REFERENCE INFORMATION
(RE4049)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	8.000	4.000	.000	4.250	SREF 2690.0000 SQ.FT.
(RE4050)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	8.000	4.000	.000	4.250	LREF 1290.3000 IN.
						BREF 1290.3000 IN.
						XMRF .0000 IN.
						YMRF .0000 IN.
						ZMRF .0000 IN.
						SCALE .0200

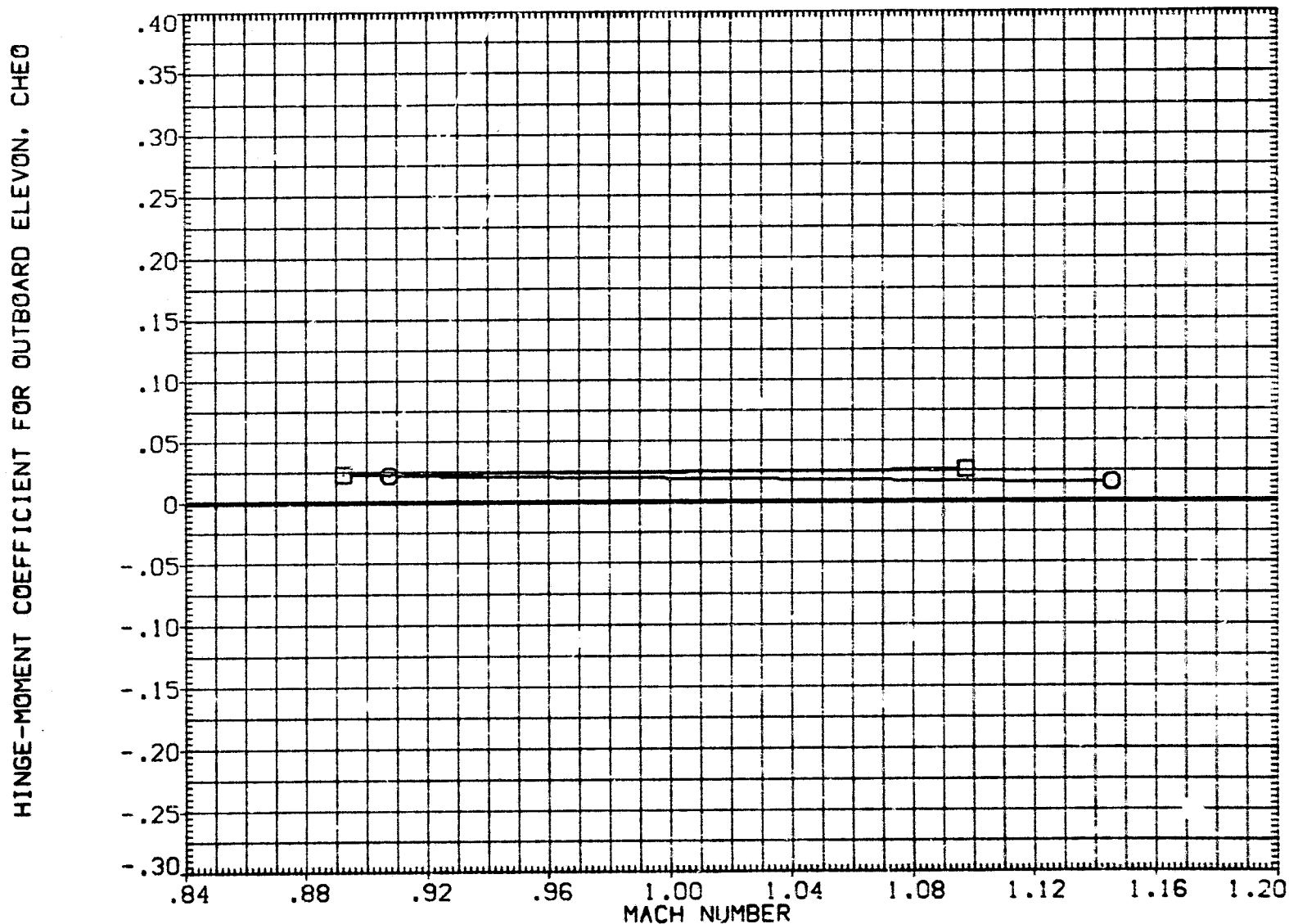


FIG. 123 SUMMARY, MACH RAMP MAXIMUM ELEVON HINGE MOMENTS
(A) BETA = -.06

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1250.7000 IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000 IN.
(AE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000 IN.
(AE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 379) ORBITER BASE. CP379

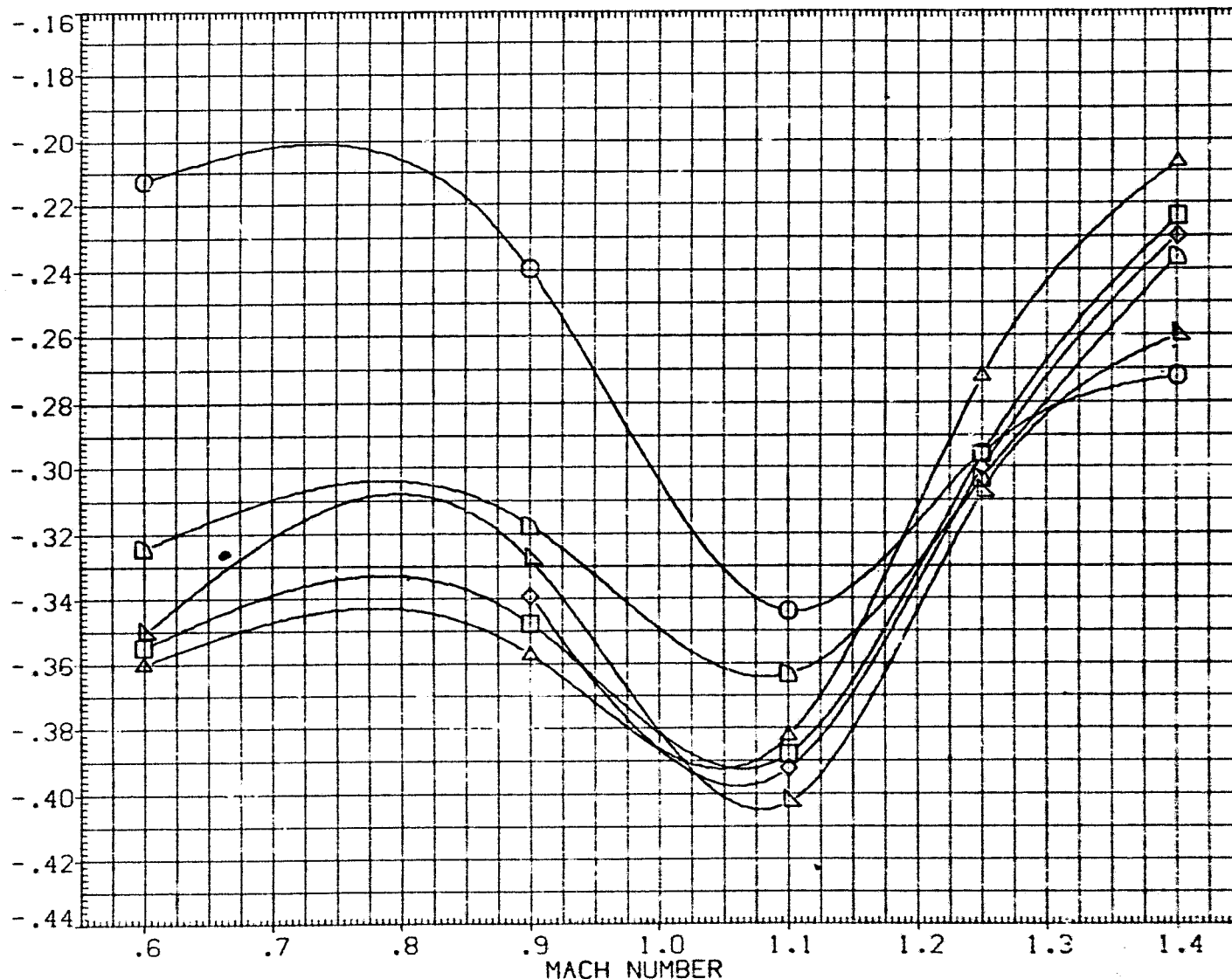


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(AE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(AE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 717) ORBITER BASE, CP717

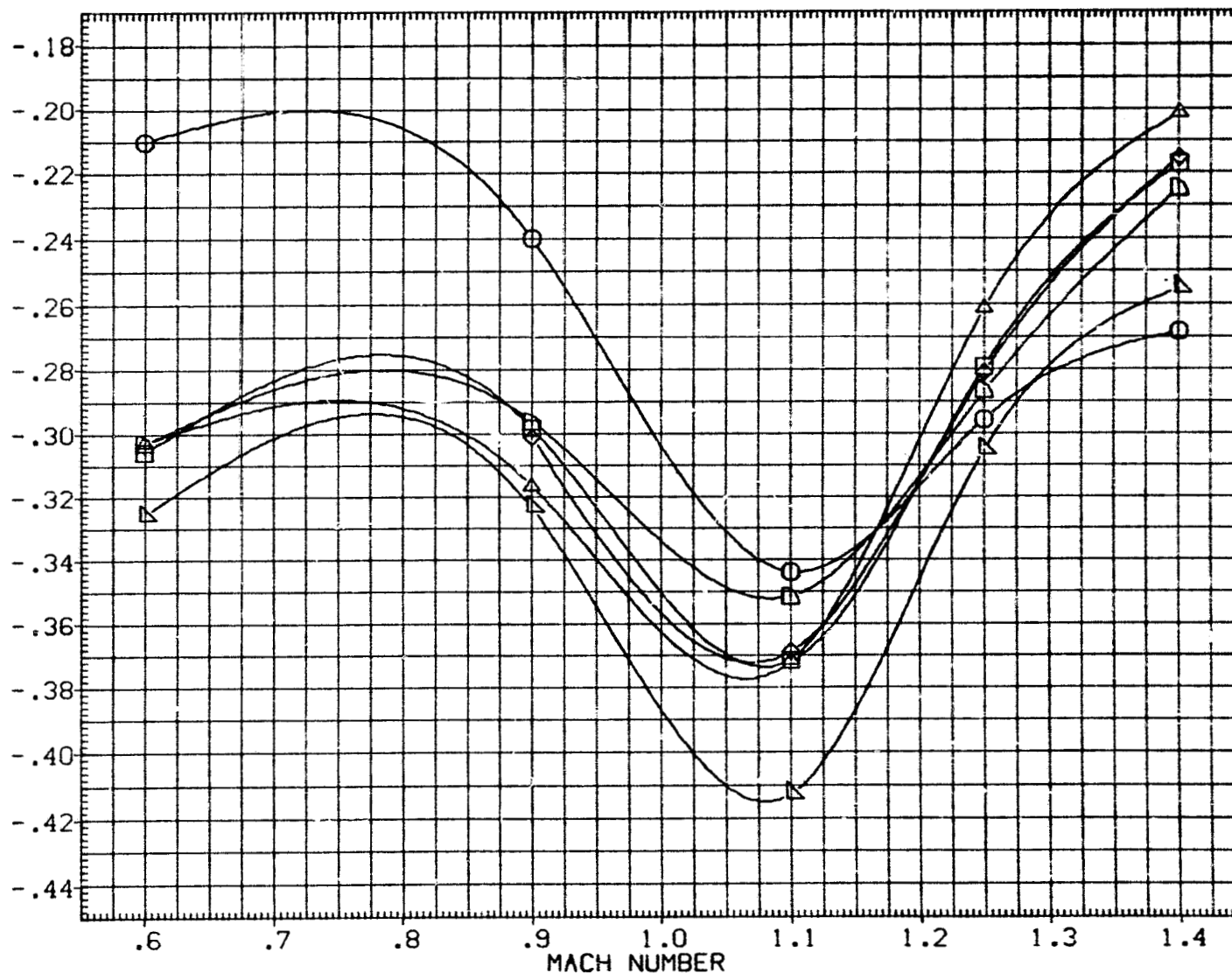


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(AE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(AE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 380) ORBITER BASE, CP380

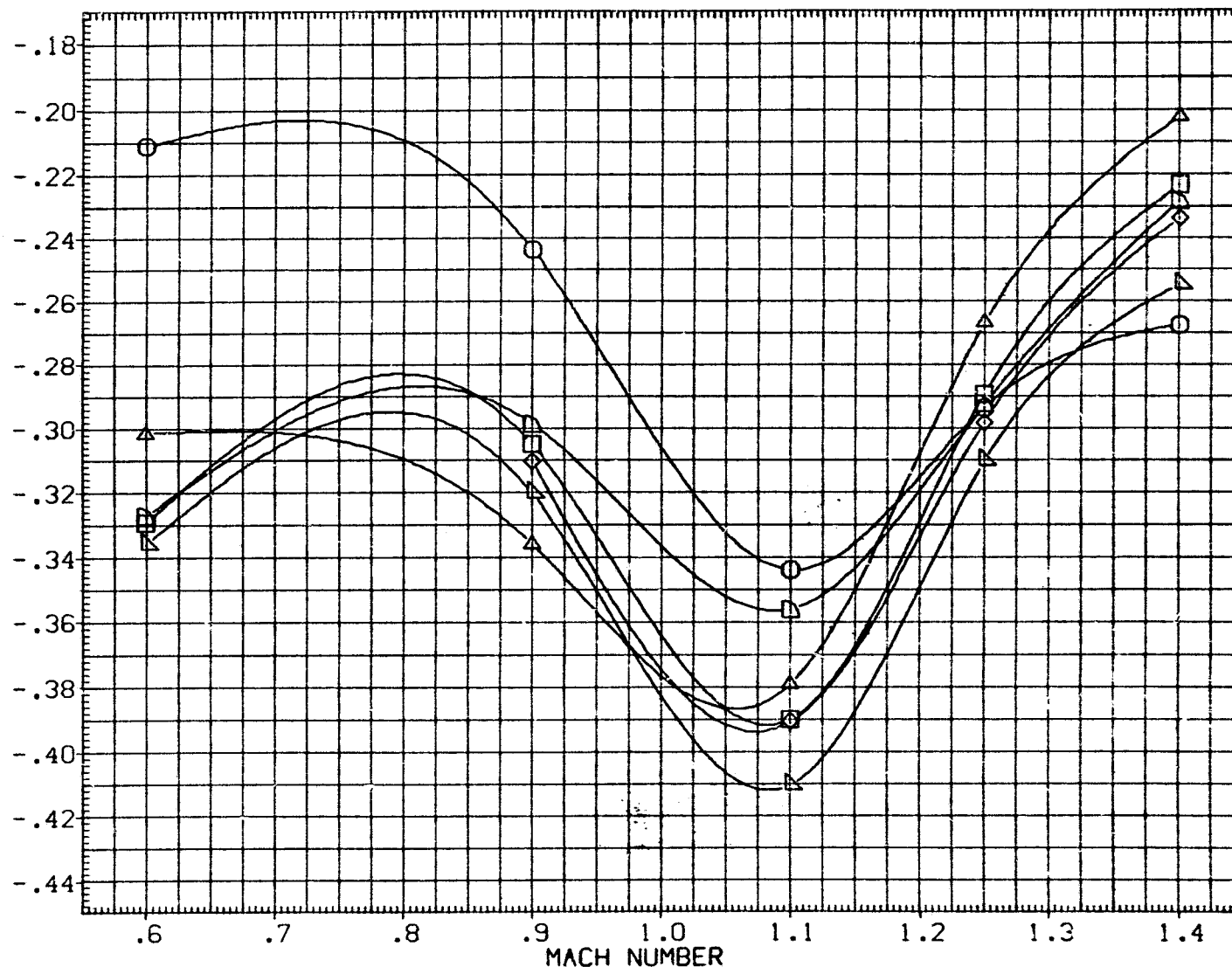


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(AE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(AE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 718) ORBITER BASE. CP718

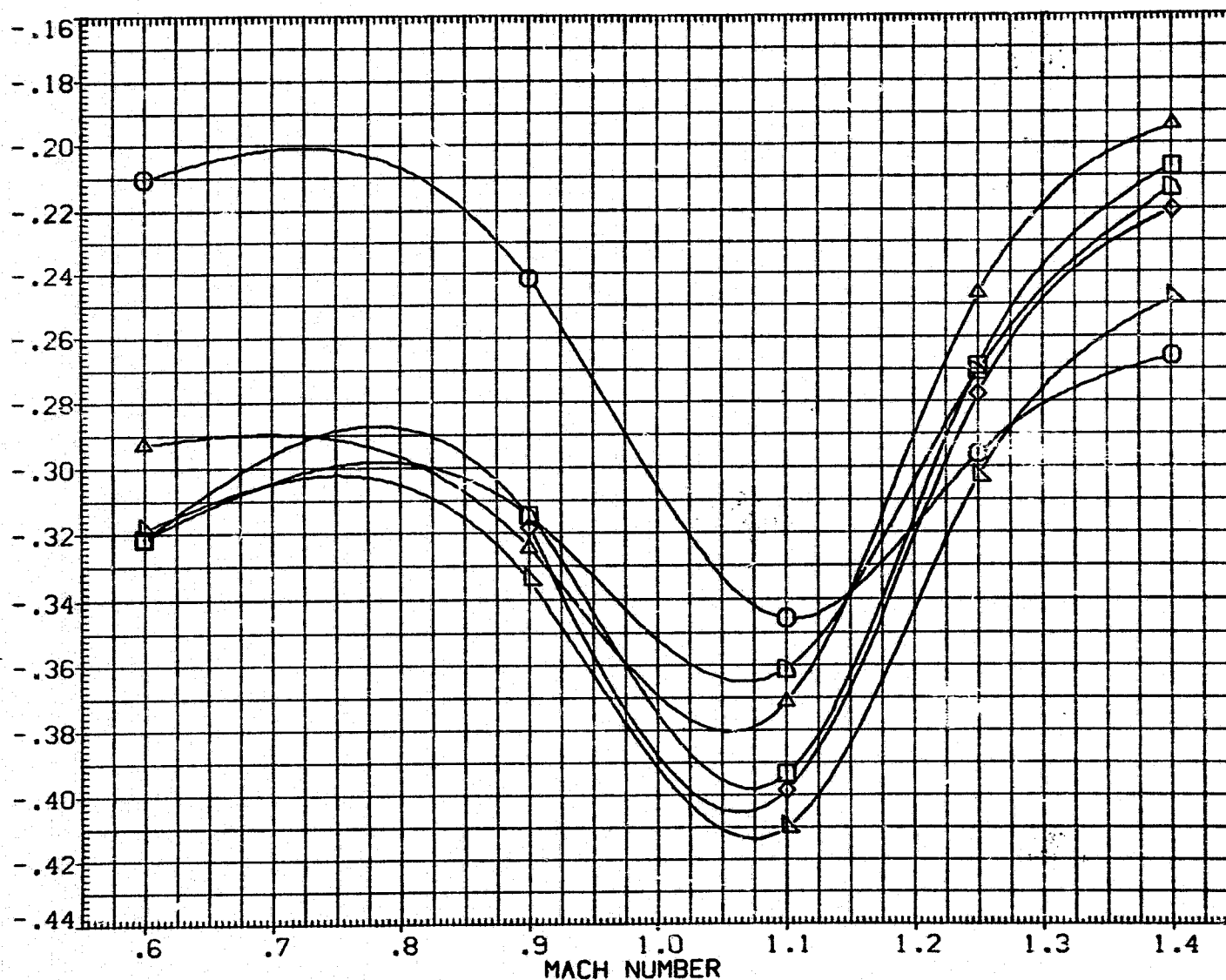


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION	
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000 IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000 IN.
(AE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000 IN.
(AE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000 IN.
					SCALE	.0200

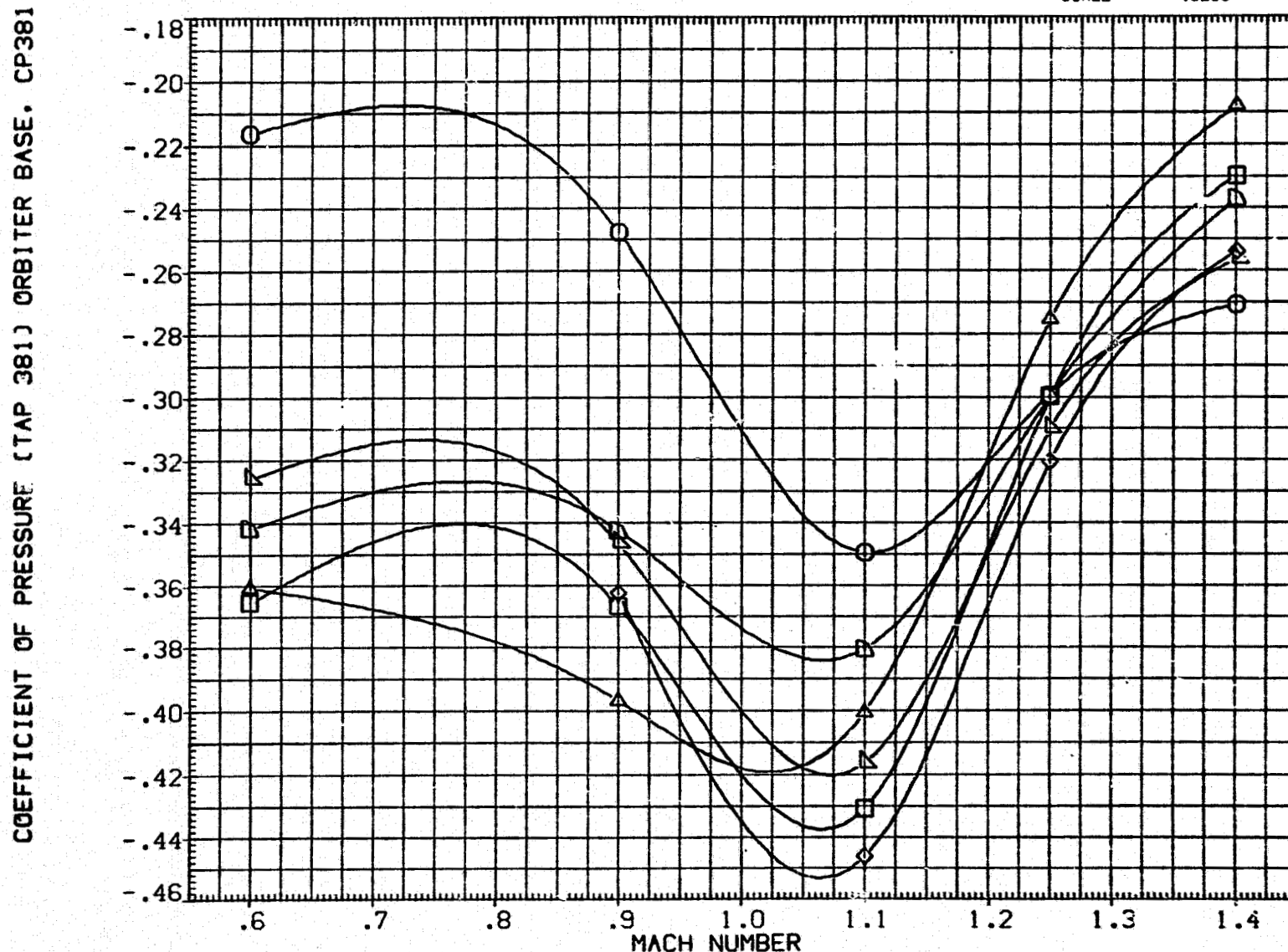


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4N28)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(AE4N20)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(AE4N16)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(AE4N11)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(AE4NB0)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NC. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(AE4NB5)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 716) ORBITER BASE, CP716

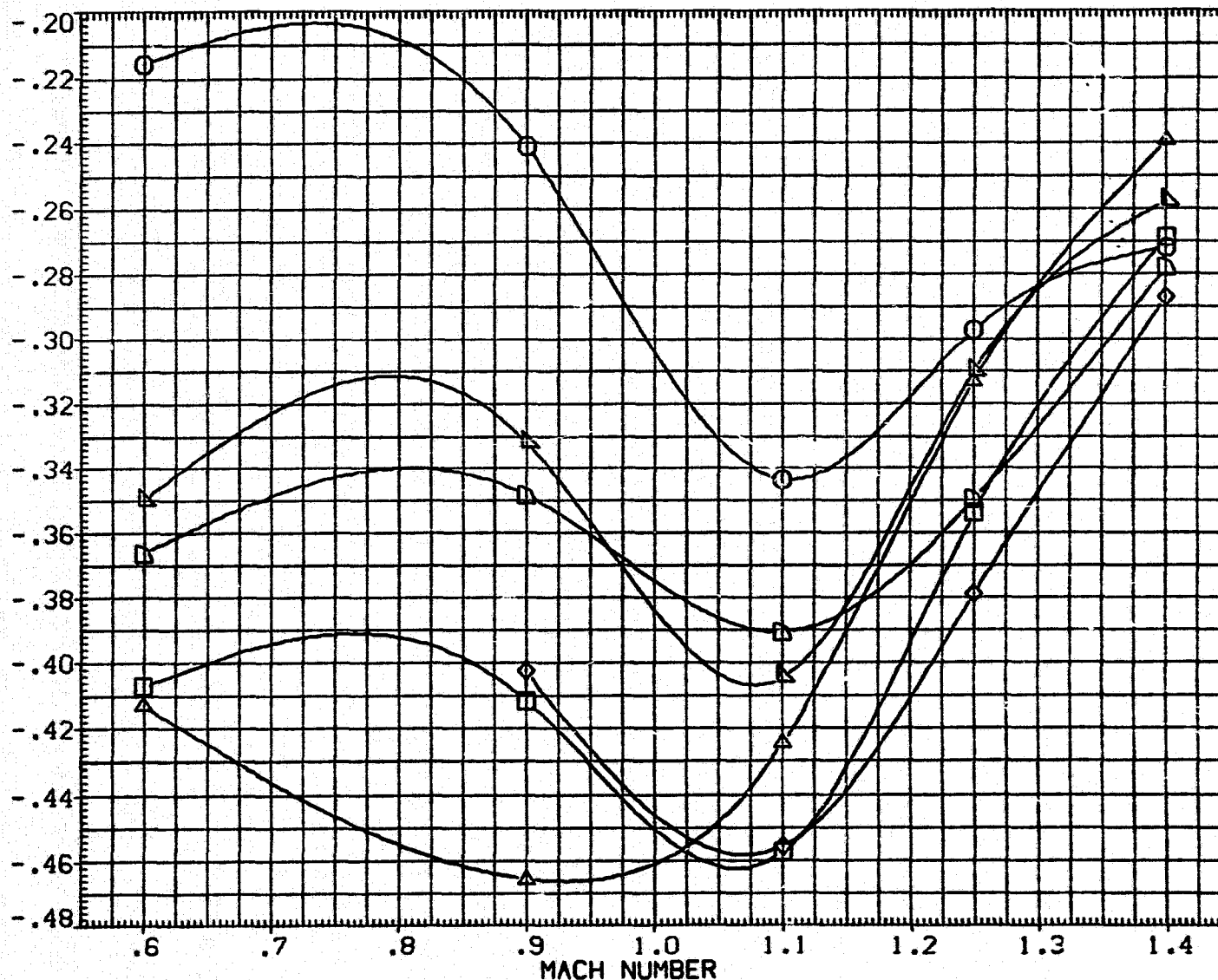


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF 2690.0000 SQ.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF 1290.3000 IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF 1290.3000 IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP .0000 IN.
(AE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP .0000 IN.
(AE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 720) ORBITER BASE, CP720

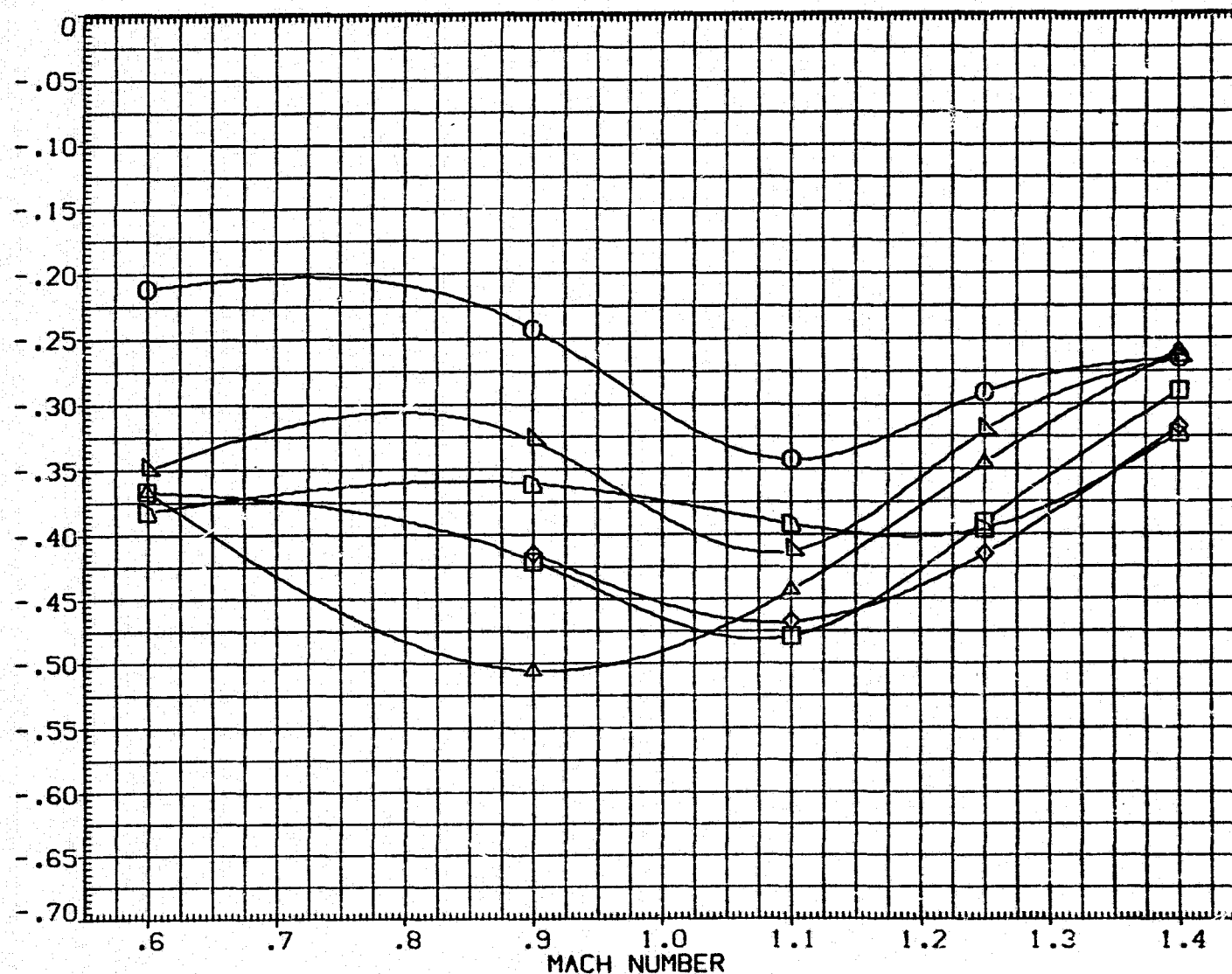


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	REF	1290.3000	IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(AE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(AE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

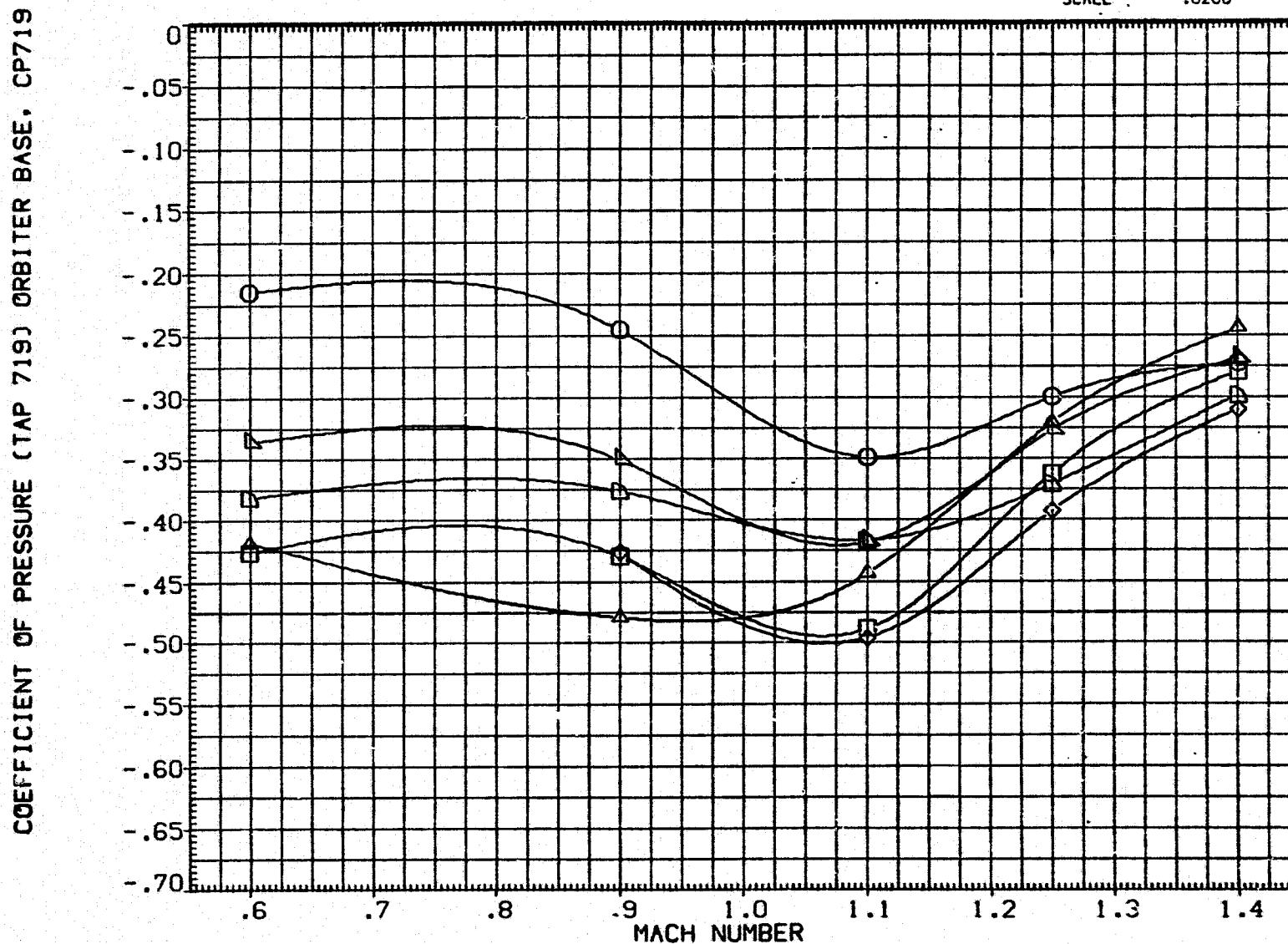


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(AE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(AE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(AE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000 IN.
(AE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000 IN.
(AE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000 IN.
(AE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 374) ORBITER BASE, CP374

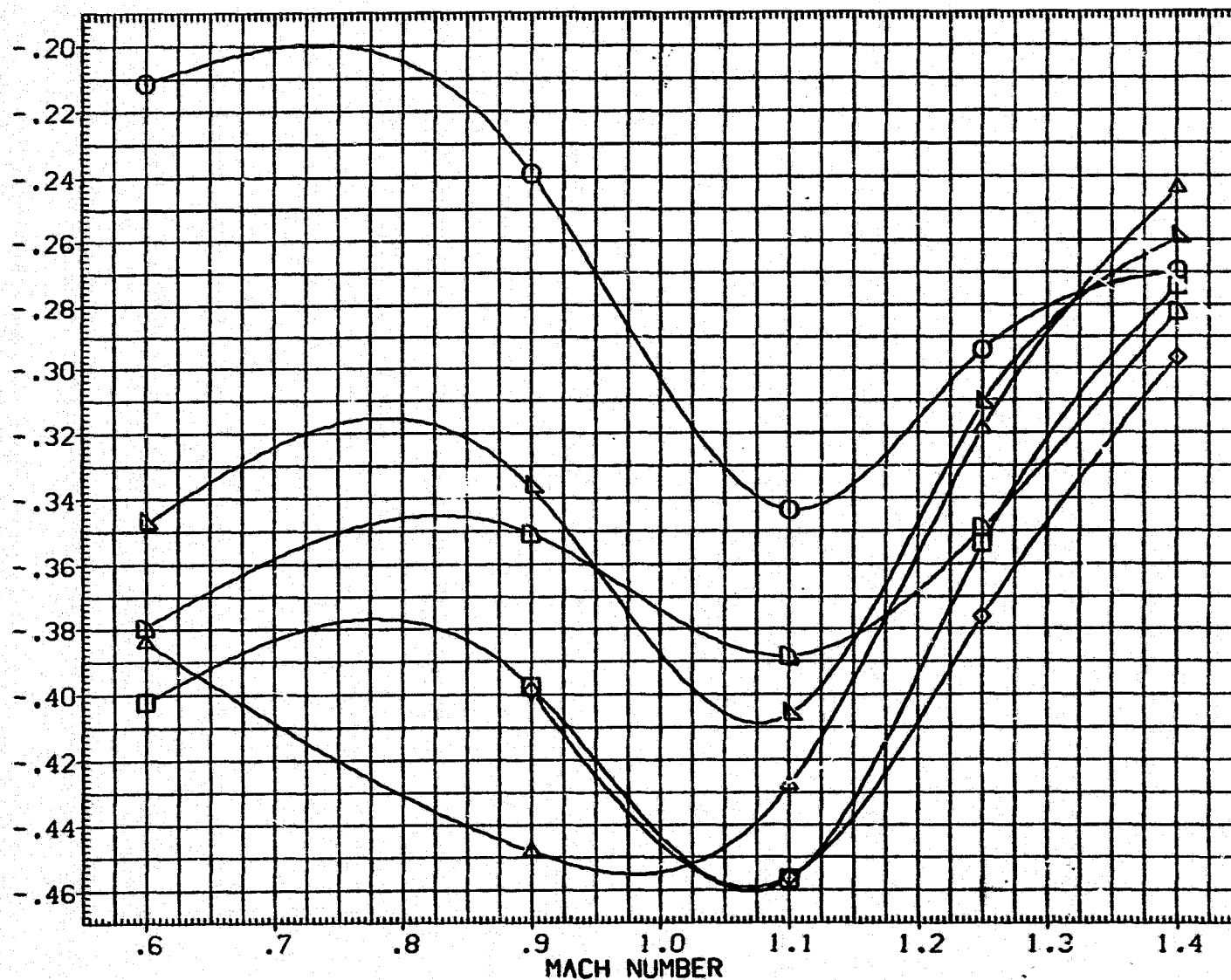


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION
(AE4N28)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF 2690.0000 SQ.FT.
(AE4N20)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF 1290.3000 IN.
(AE4N16)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF 1290.3000 IN.
(AE4N11)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP .0000 IN.
(AE4NB0)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP .0000 IN.
(AE4NB5)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 376) ORBITER BASE, CP376

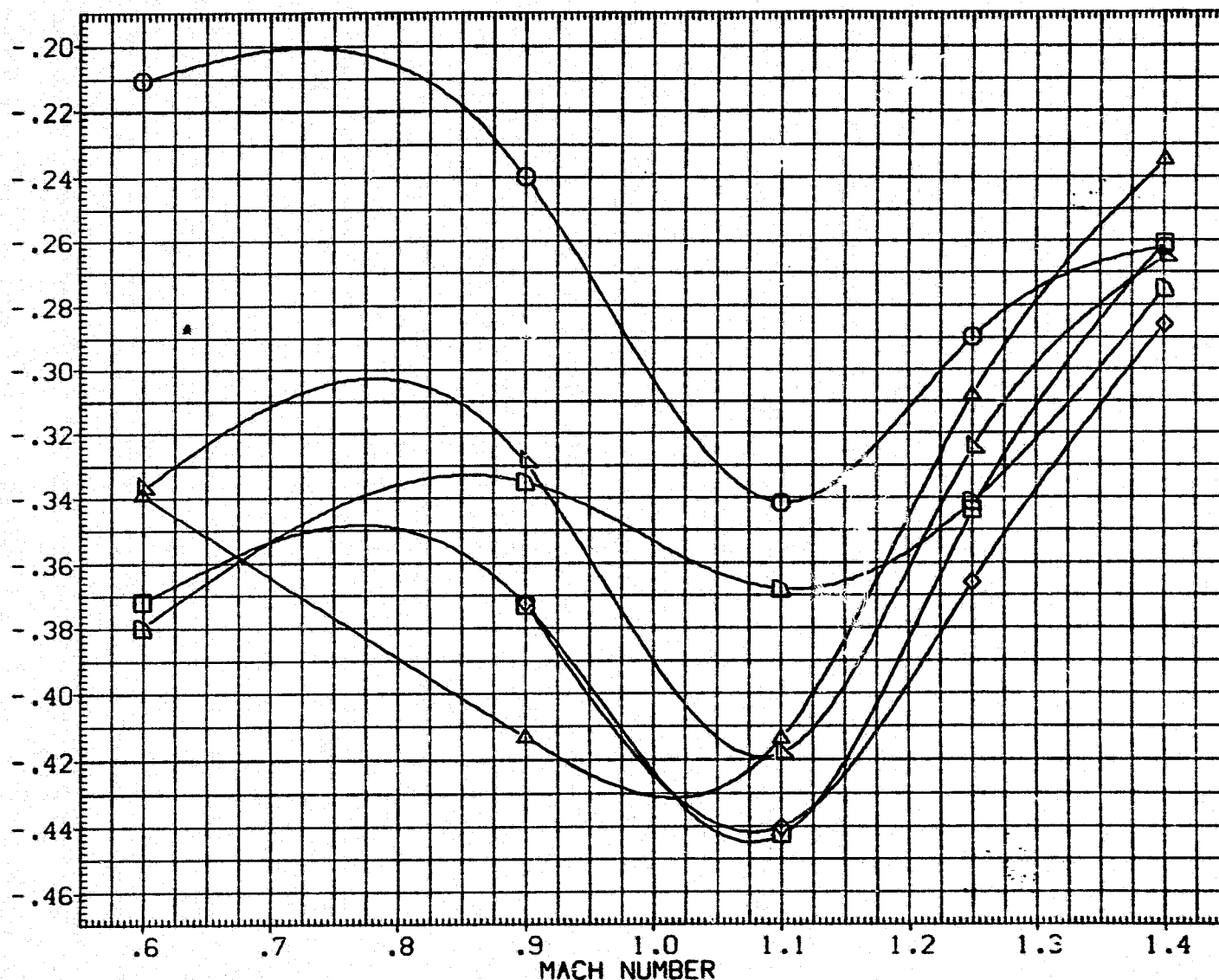


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 378) ORBITER BASE, CP378

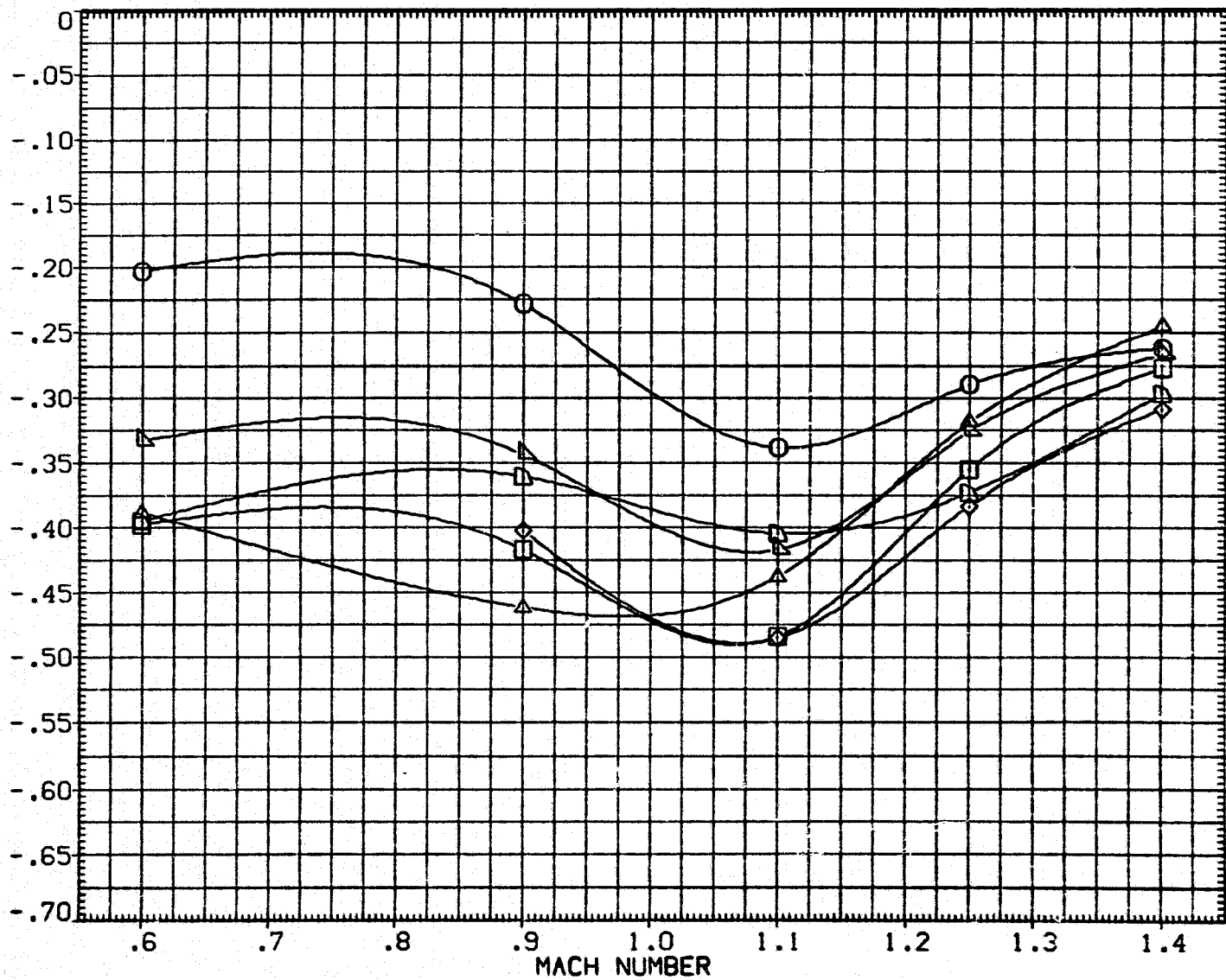


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 715) ORBITER BASE. CP715

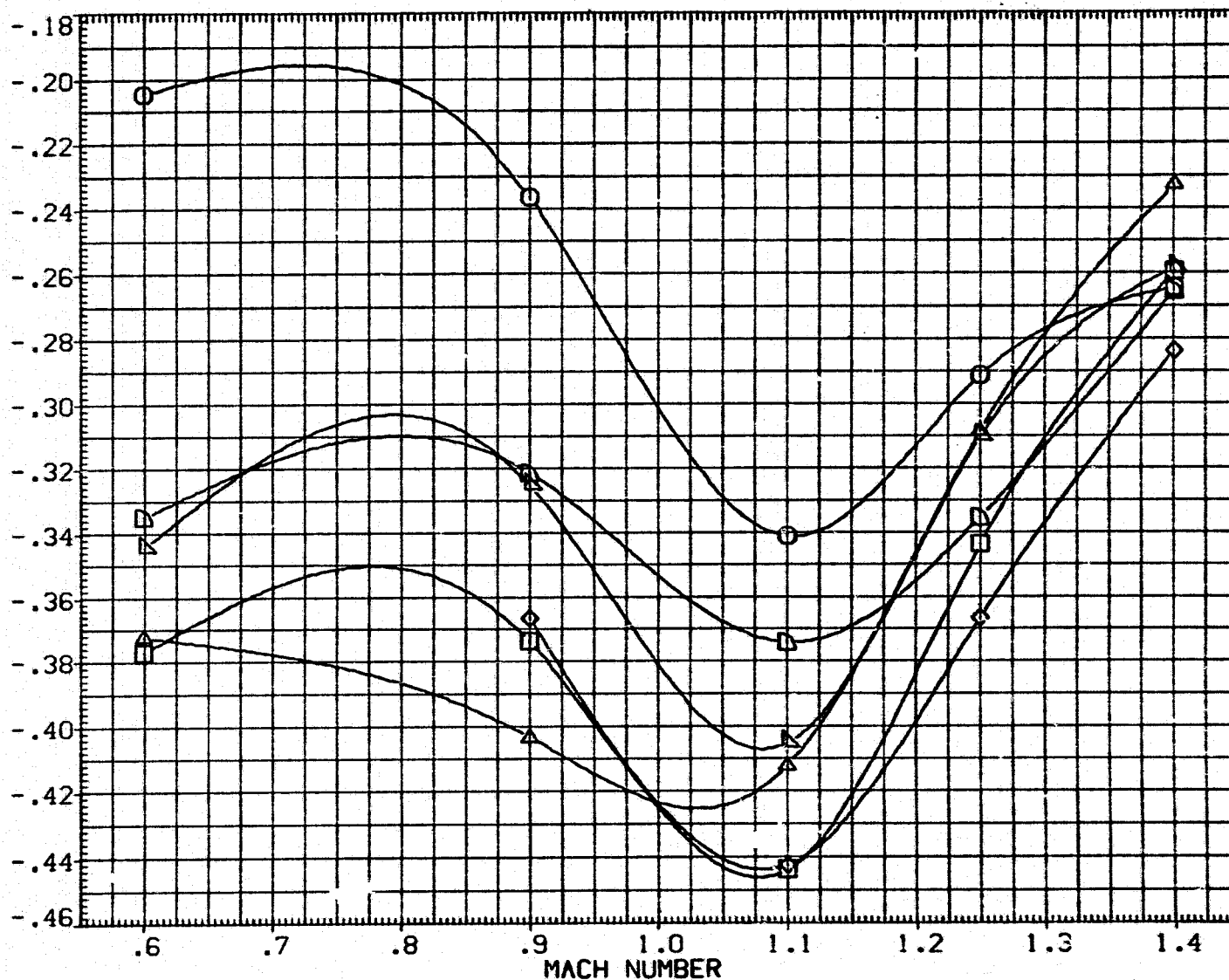


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(FE4N20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4N80)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4N85)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 375) ORBITER BASE, CP375

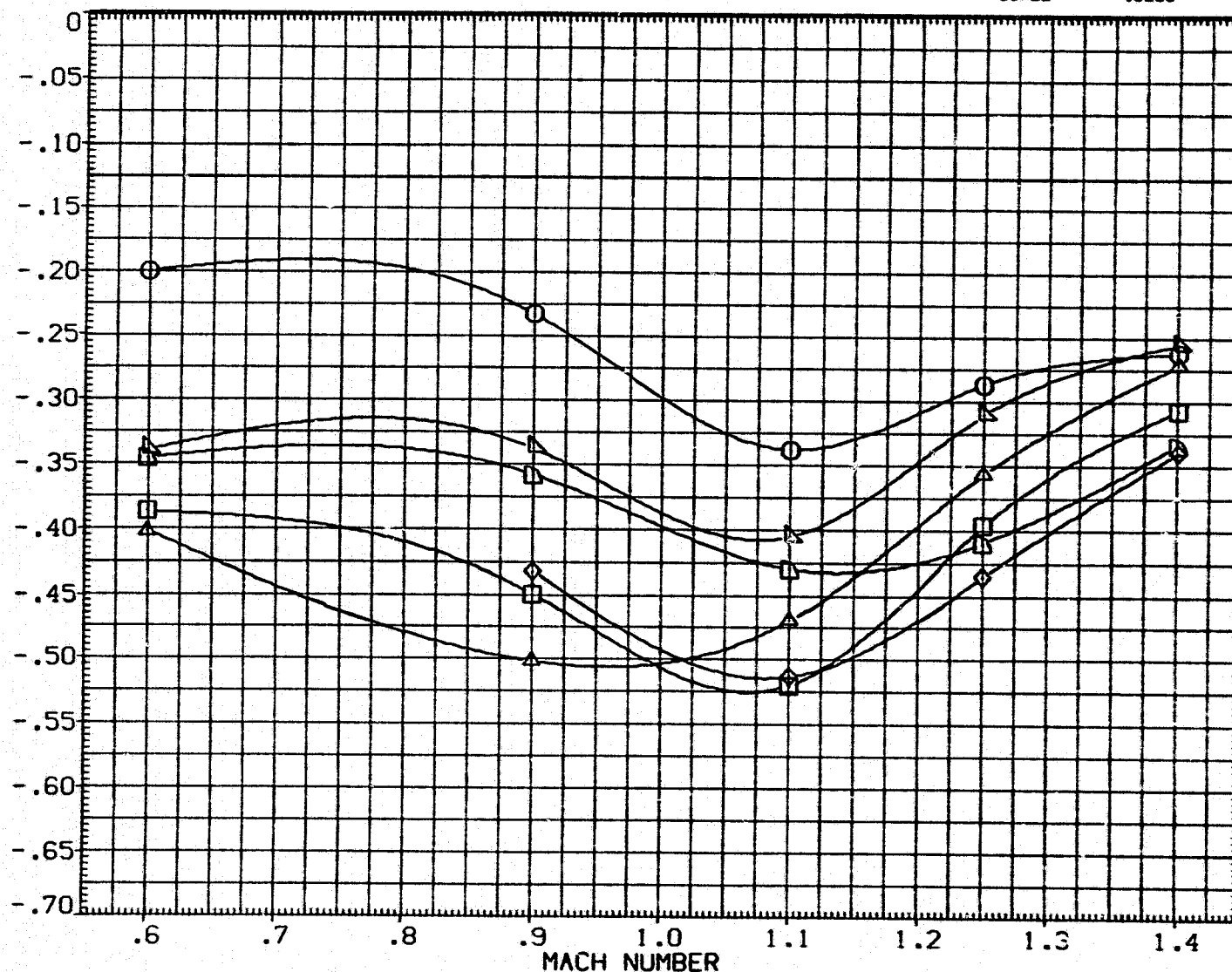


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 337) ORBITER BASE. CP377

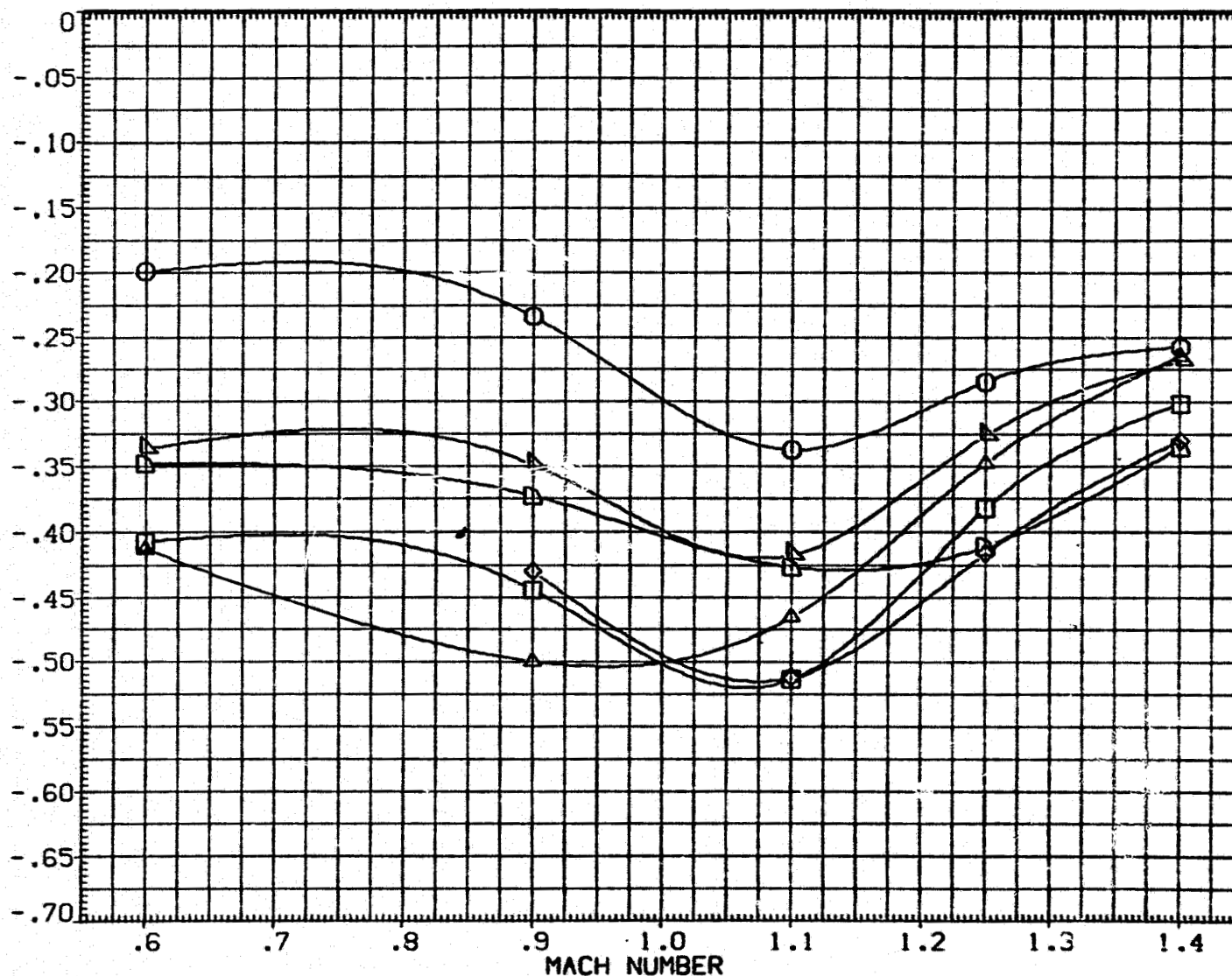


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 721) ORBITER BASE. CP721

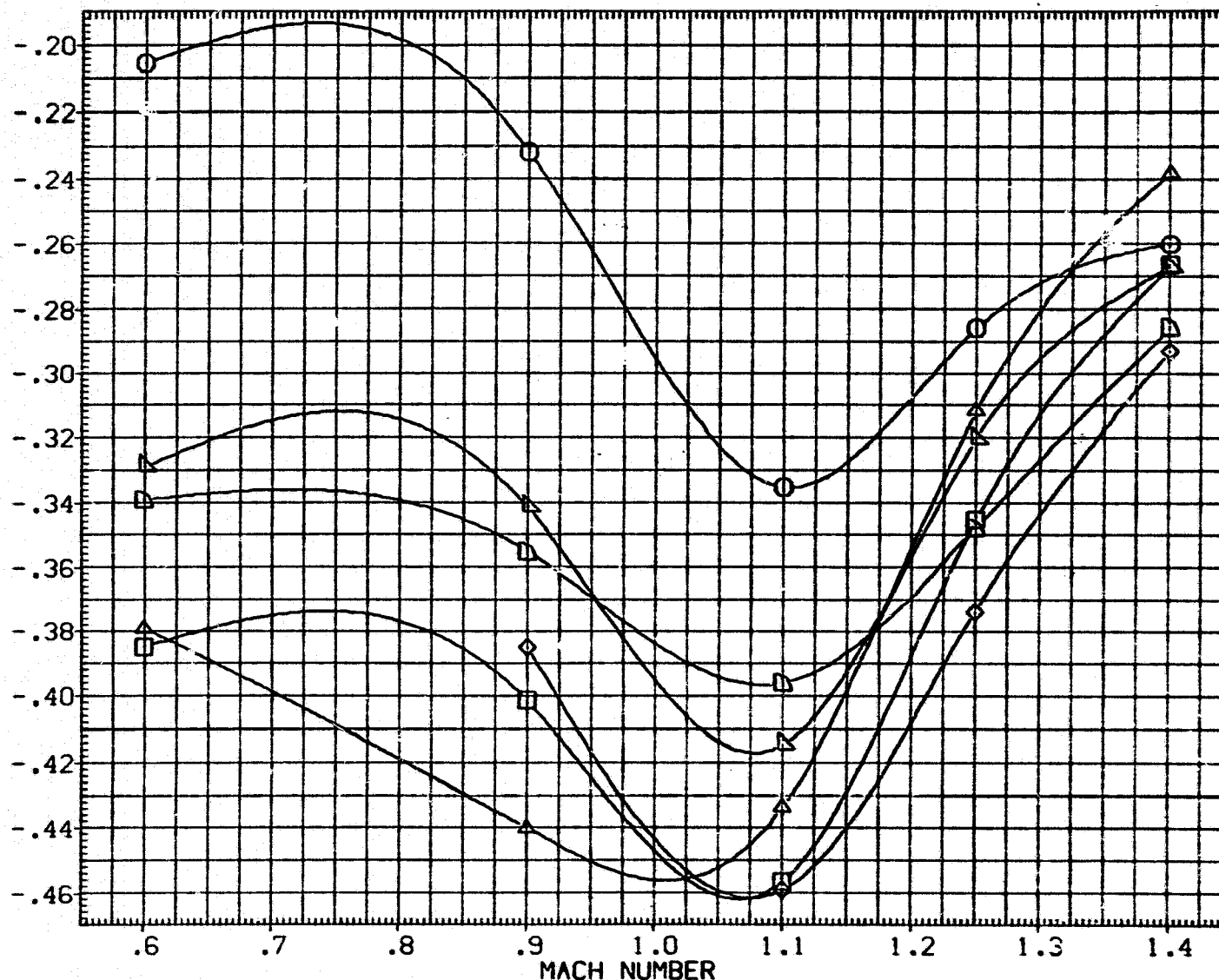


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000 IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000 IN.
(FE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000 IN.
(FE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 372) ORBITER BASE. CP372

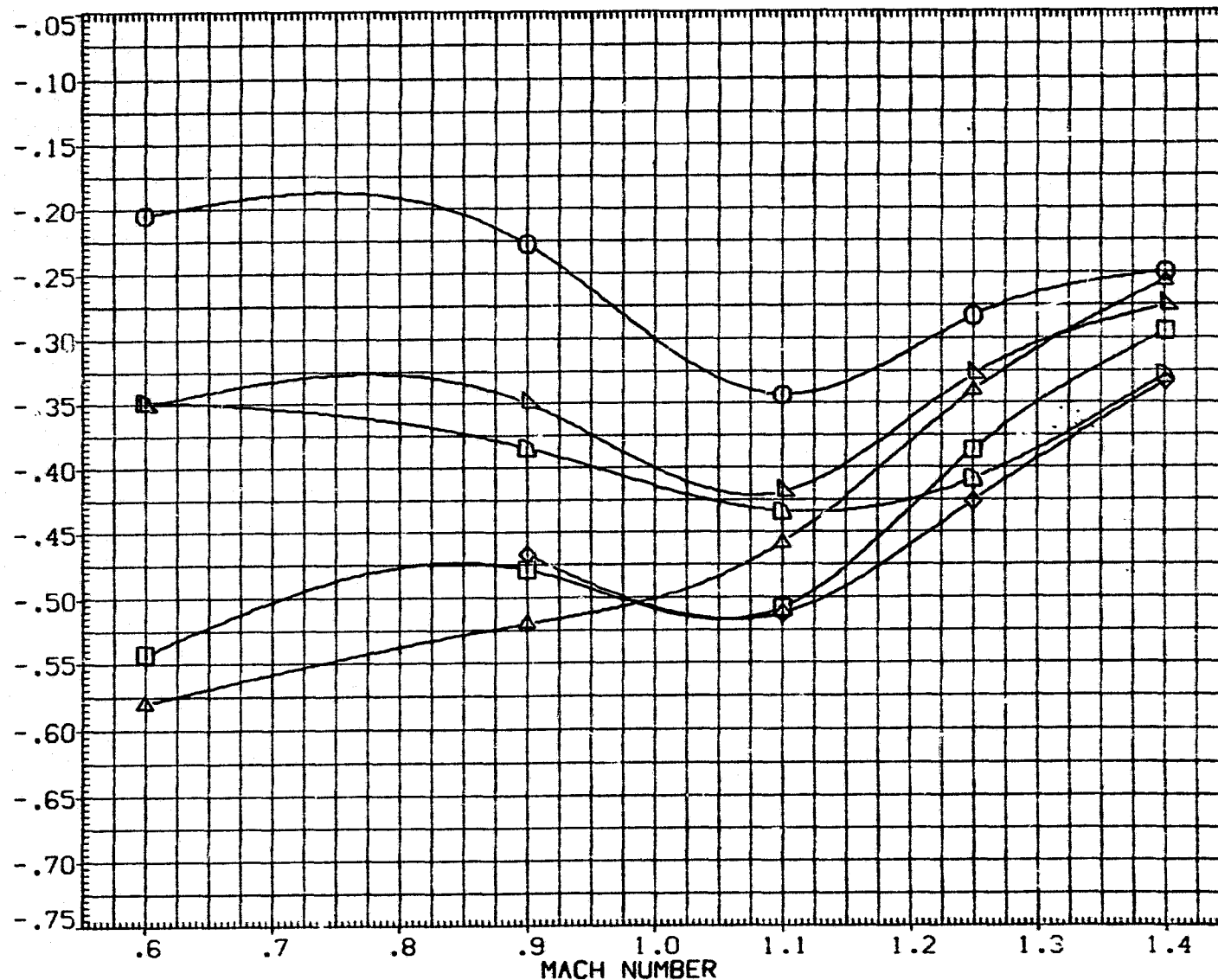


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(FE4N20)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4NB0)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4NB5)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 714) ORBITER BASE, CP714

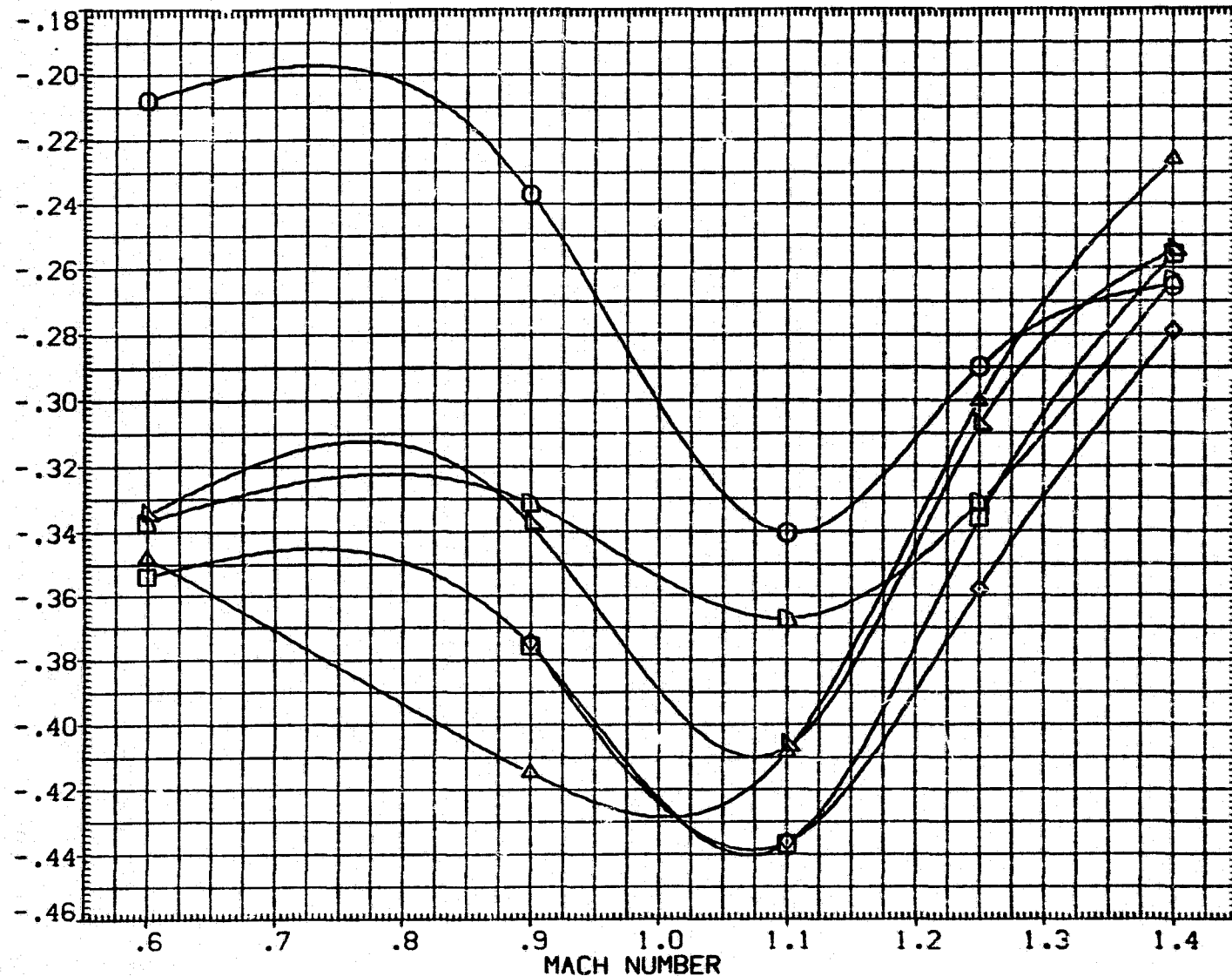


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(FE4NB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(FE4NB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 722) ORBITER BASE, CP722

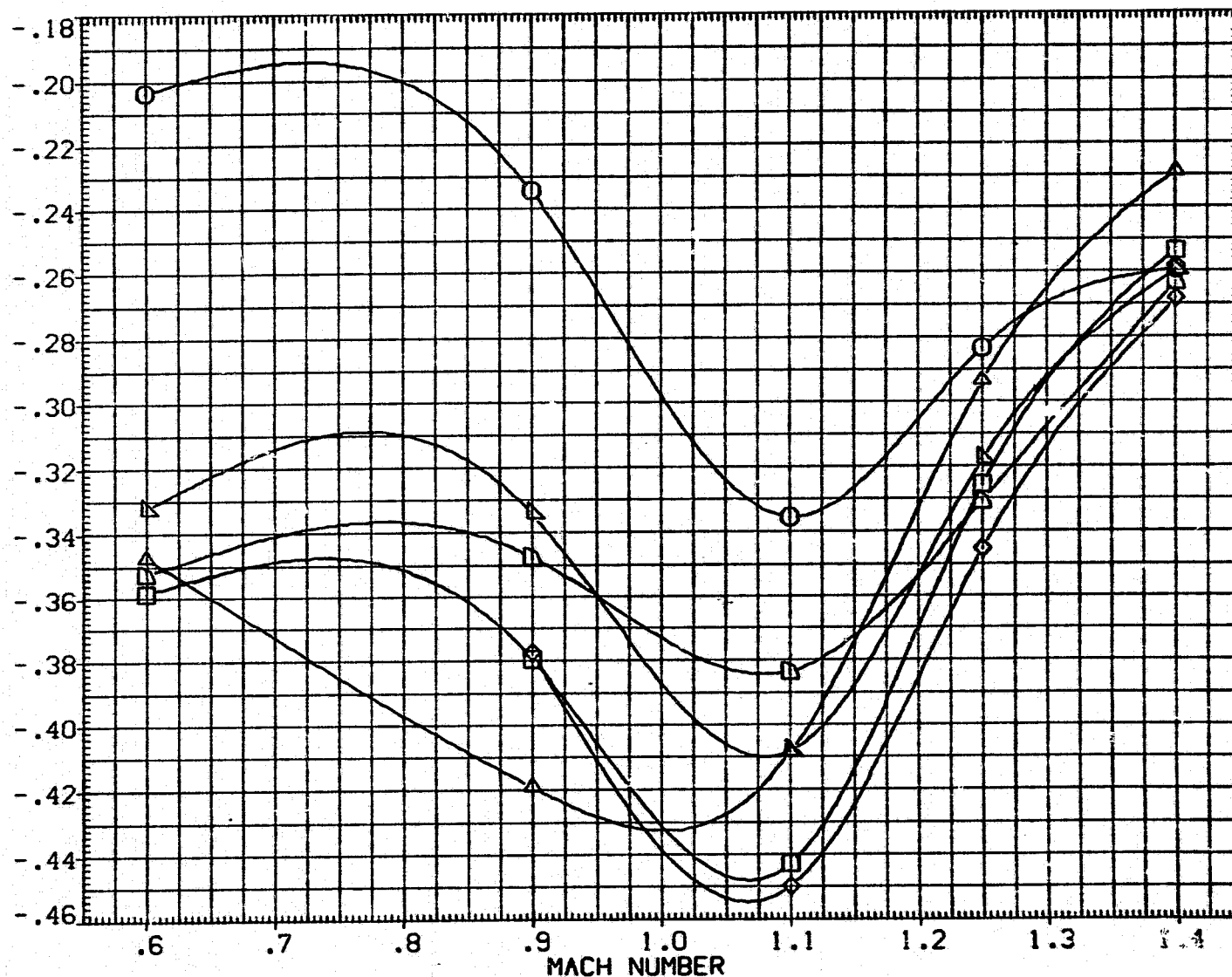


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(FE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(FE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(FE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000 IN.
(FE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000 IN.
(FE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000 IN.
(FE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 373) ORBITER BASE, CP373

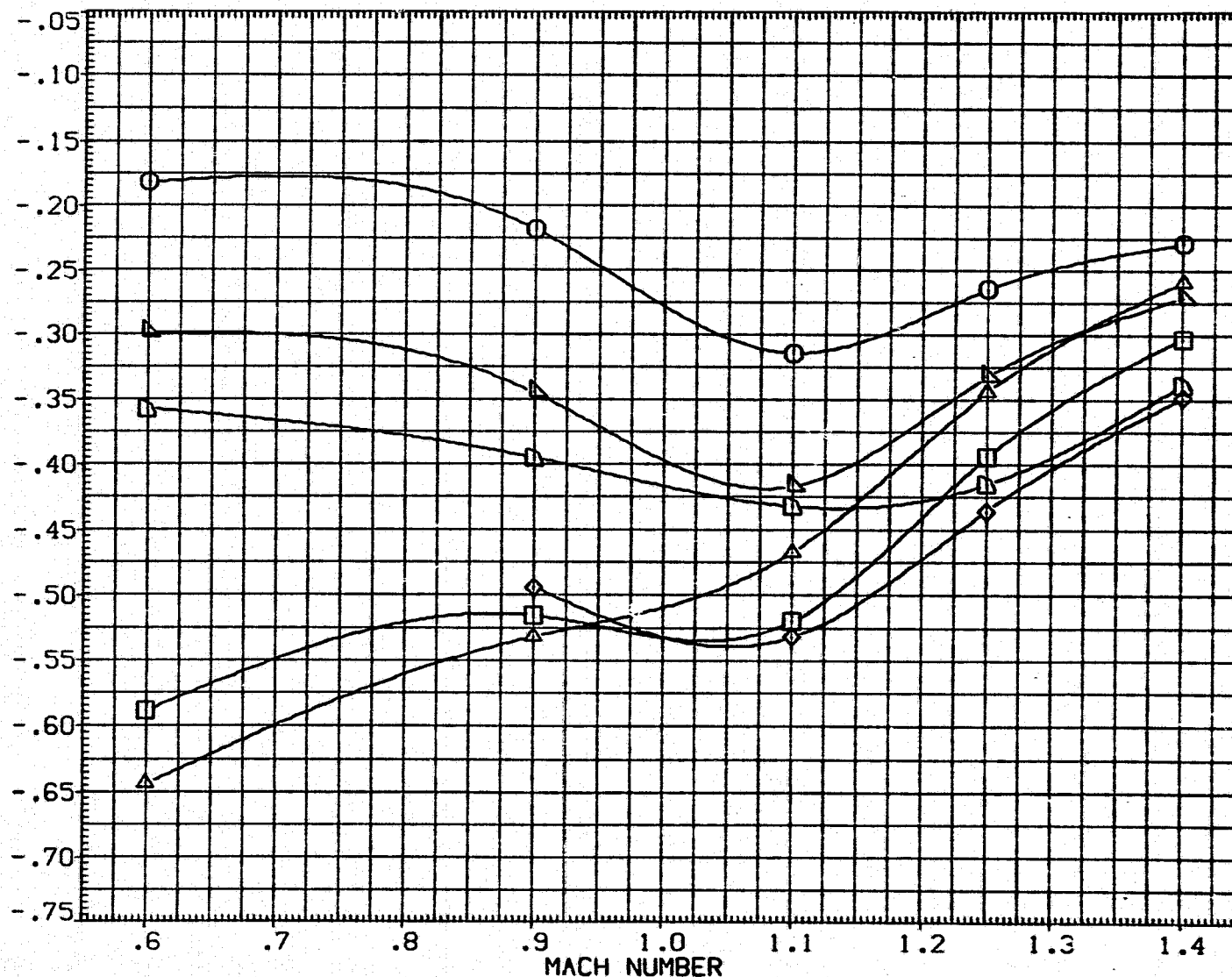


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(FE4N28)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(FE4N20)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(FE4N16)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000 IN.
(FE4N11)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XM RP	.0000 IN.
(FE4NB0)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YM RP	.0000 IN.
(FE4NB5)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZM RP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 713) ORBITER BASE. CP713

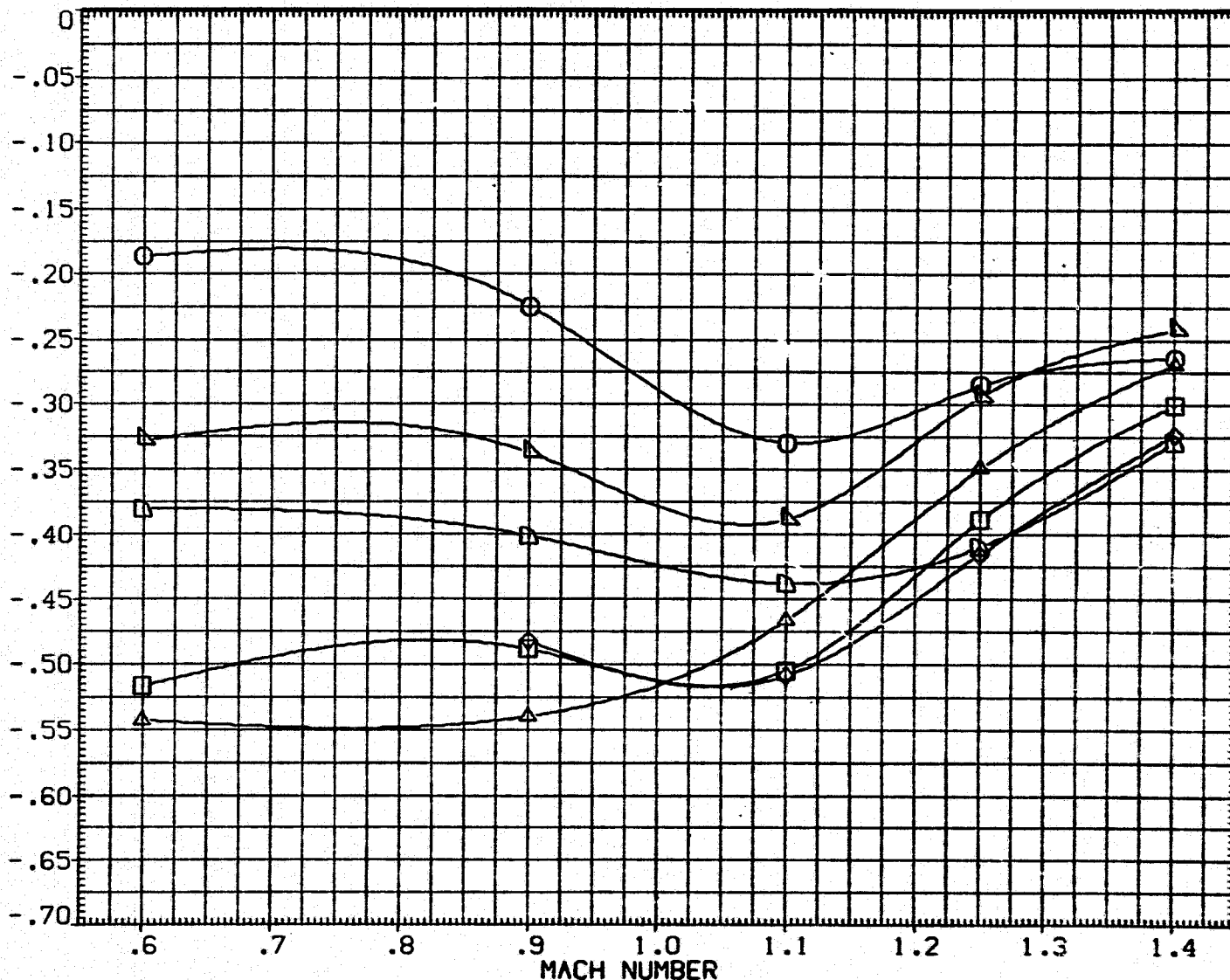


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(GE4N28)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000 SQ.FT.
(GE4N20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000 IN.
(GE4N16)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000 IN.
(GE4N11)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000 IN.
(GE4N80)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000 IN.
(GE4N85)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 723) ORBITER BASE, CP723

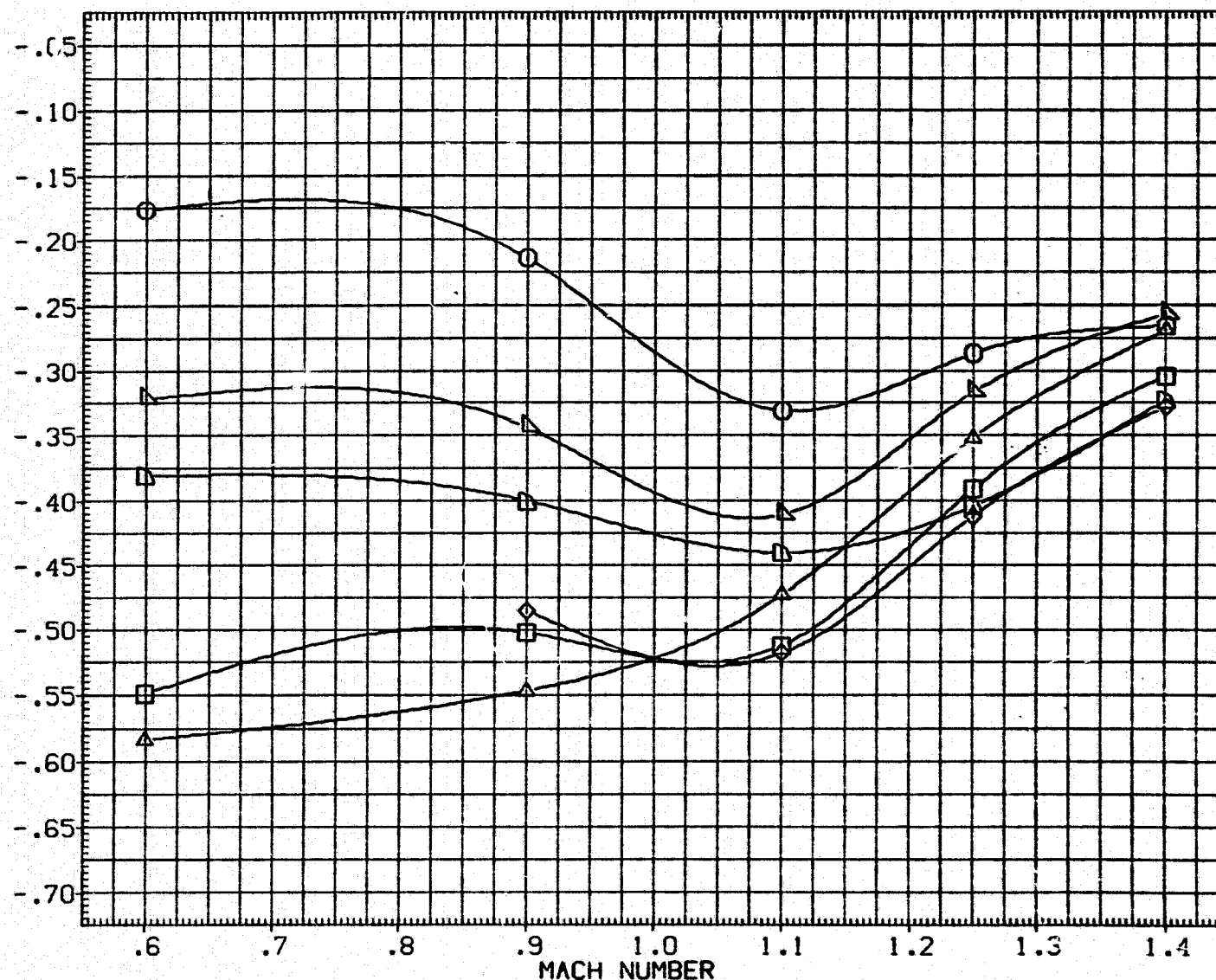


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(GE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(GE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(GE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(GE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(GE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(GE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 371) ORBITER BASE. CP371

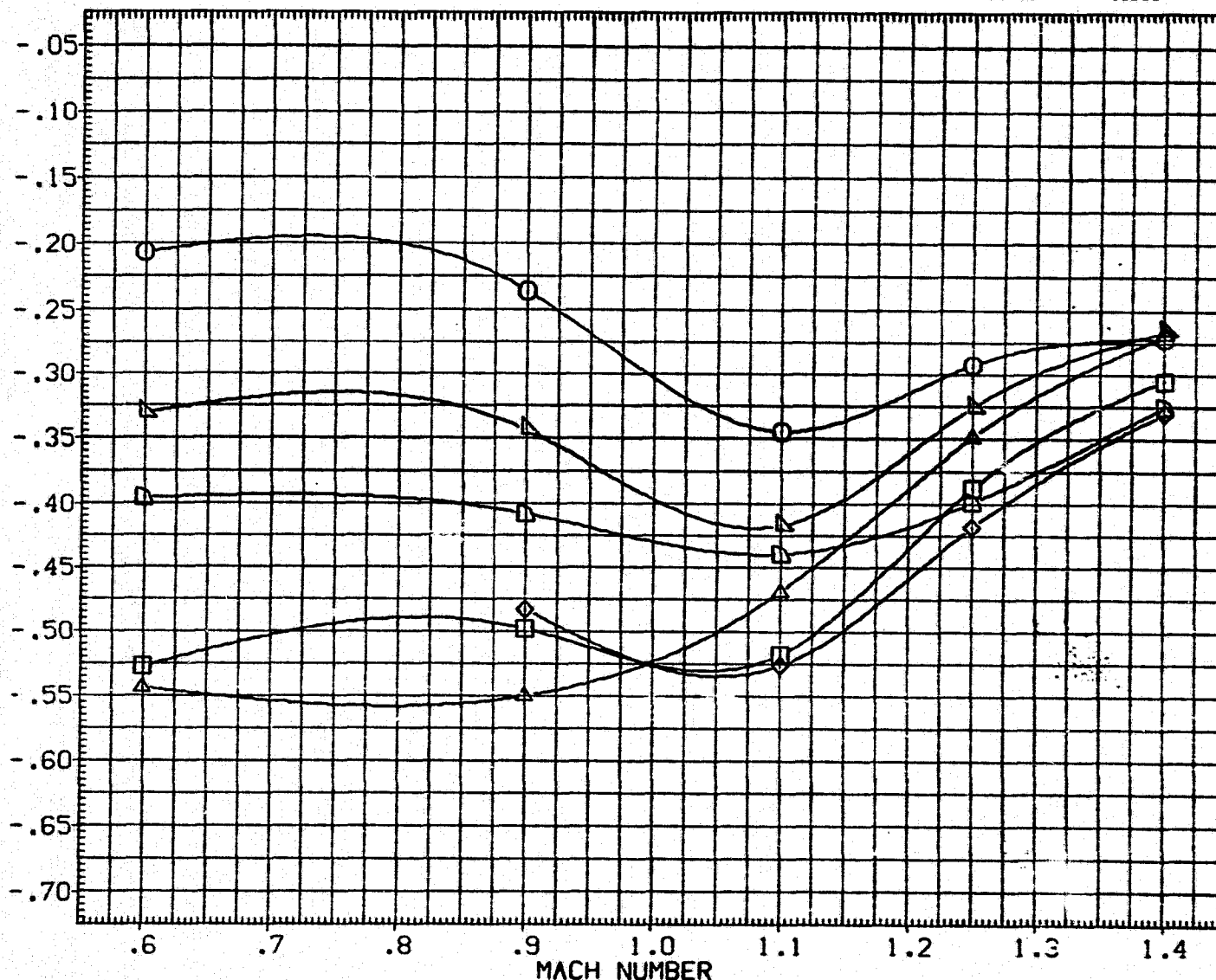


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4N28)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	50.FT.
(GE4N20)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(GE4N16)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(GE4N11)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(GE4N80)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(GE4N85)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 370) ORBITER BASE. CP370

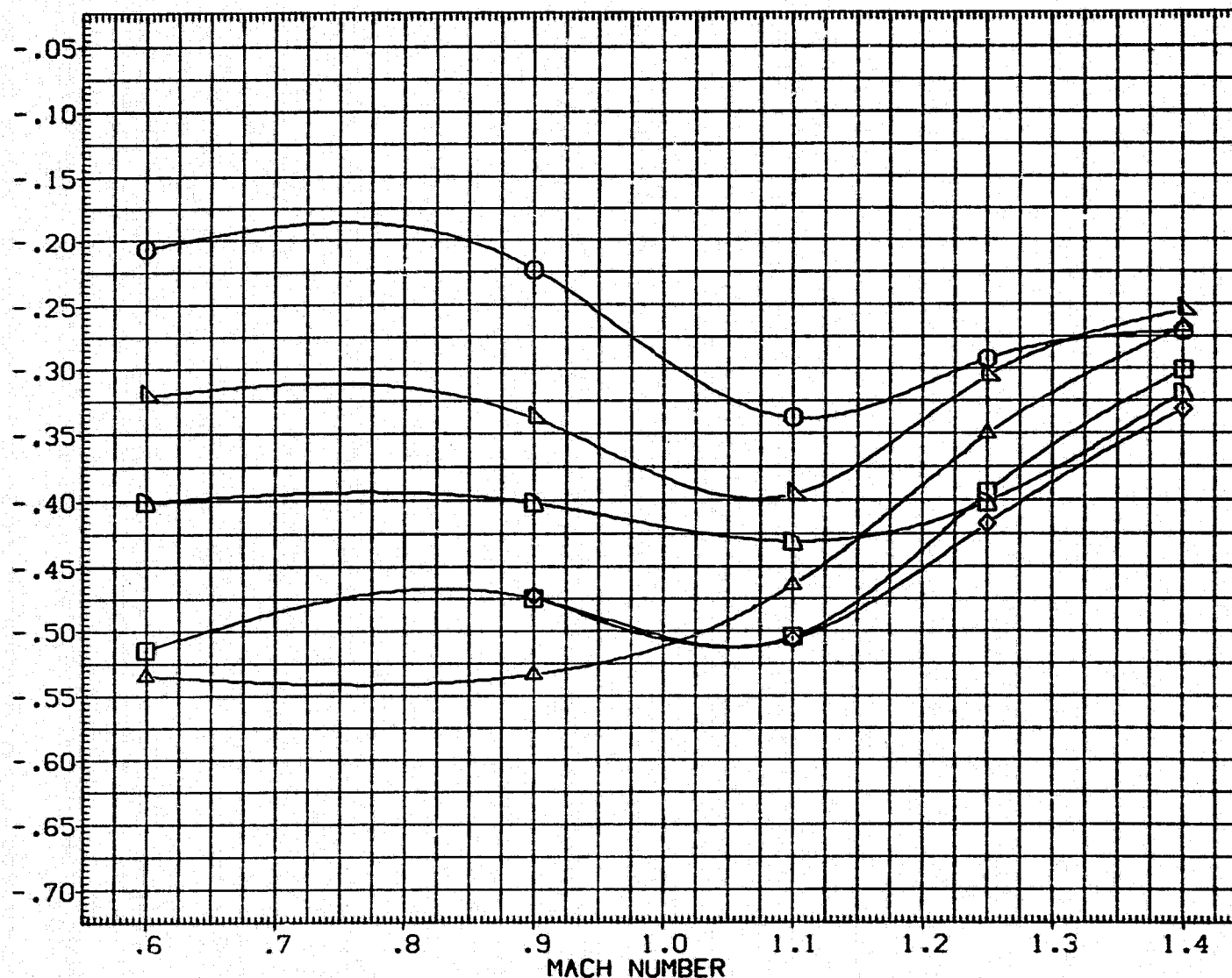


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4N28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	-4.000	SREF	2690.0000	SQ.FT.
(GE4N20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	-4.000	LREF	1290.3000	IN.
(GE4N16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	-4.000	BREF	1290.3000	IN.
(GE4N11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	-4.000	XMRP	.0000	IN.
(GE4N80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	-4.000	YMRP	.0000	IN.
(GE4N85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	-4.000	ZMRP	.0000	IN.
					SCALE	.0200	

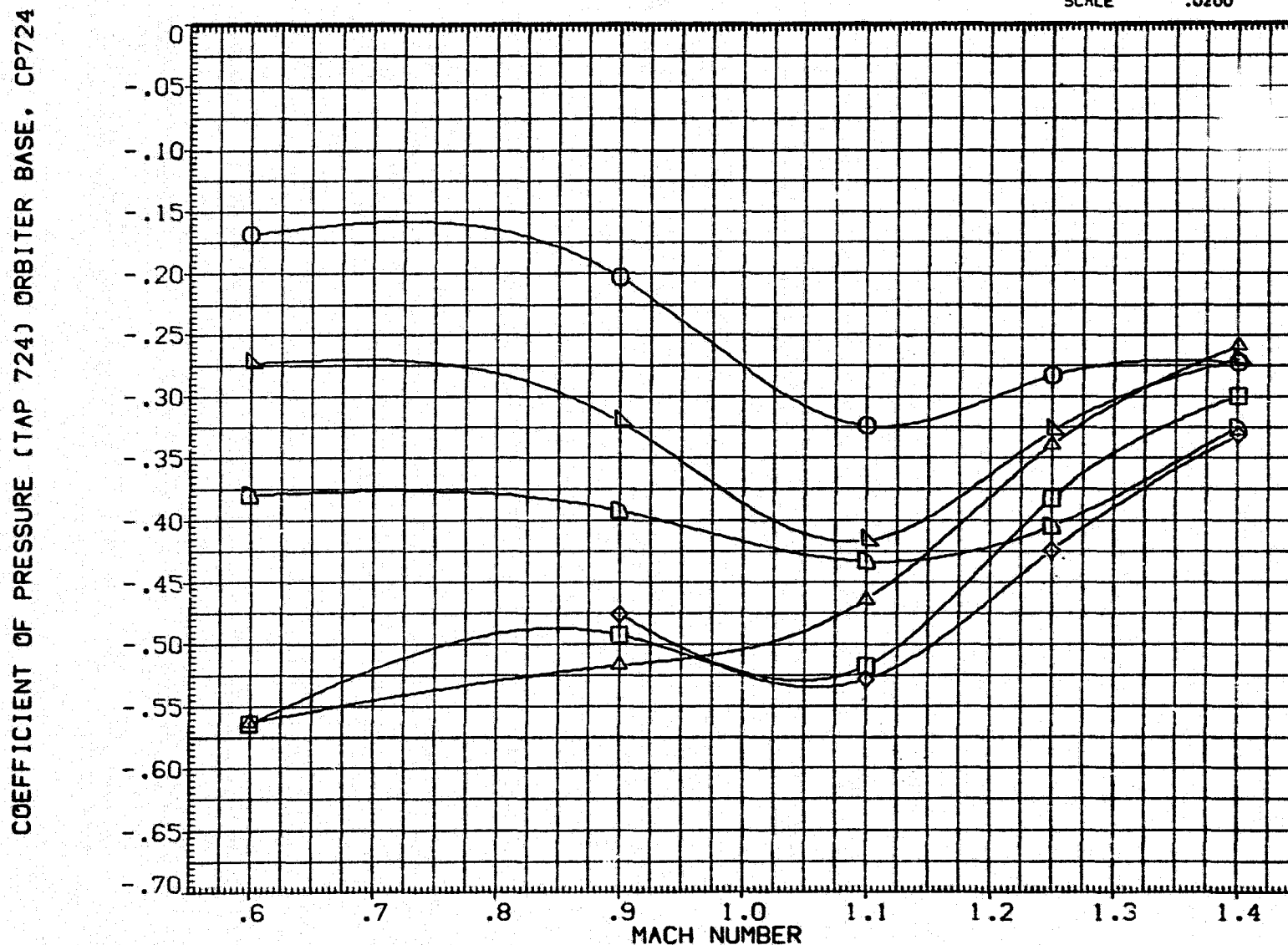


FIG. 124 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=-4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 379) ORBITER BASE. CP379

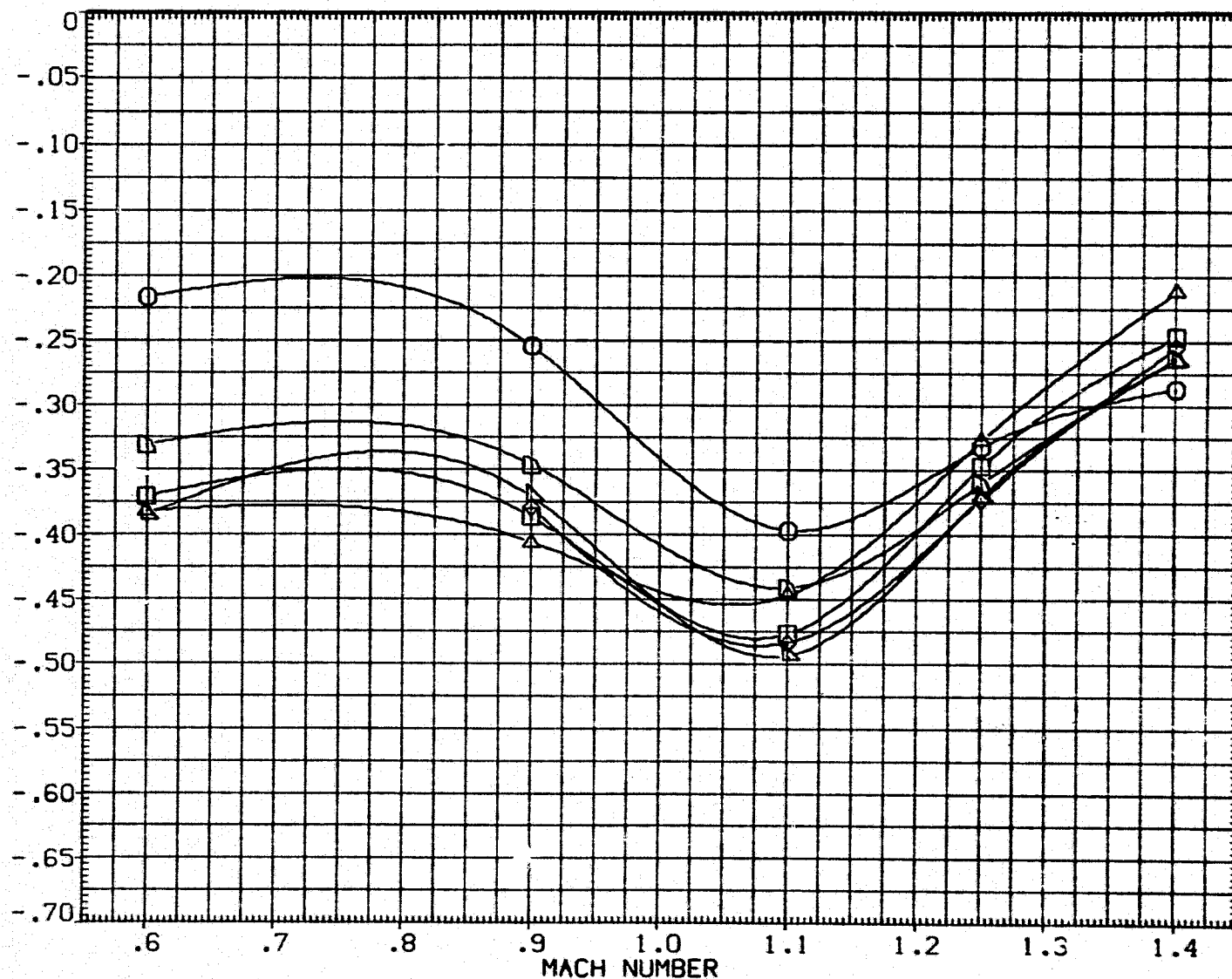


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 379) ORBITER BASE. CP379

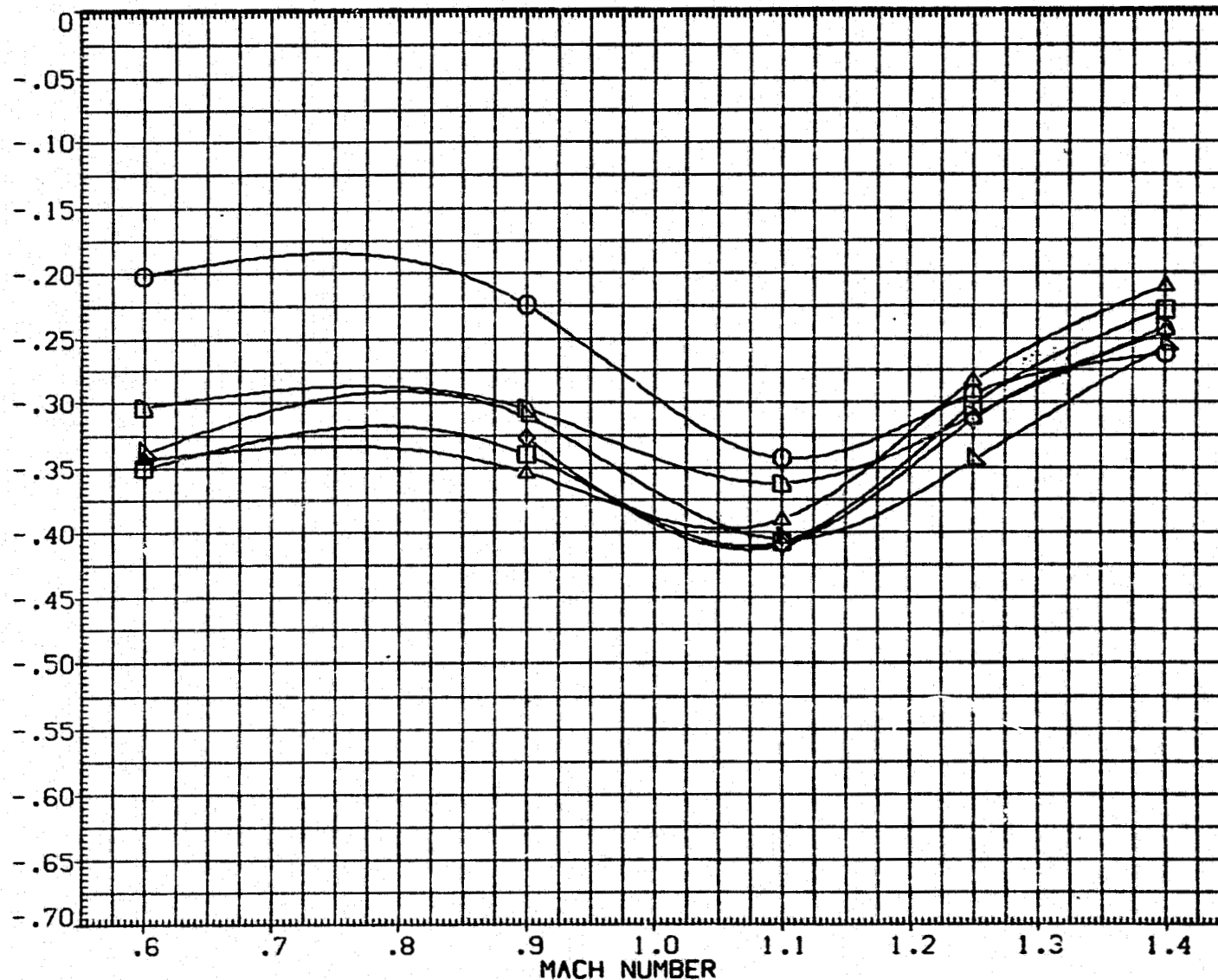


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SO.FT.
(AE4020)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 379) ORBITER BASE. CP379

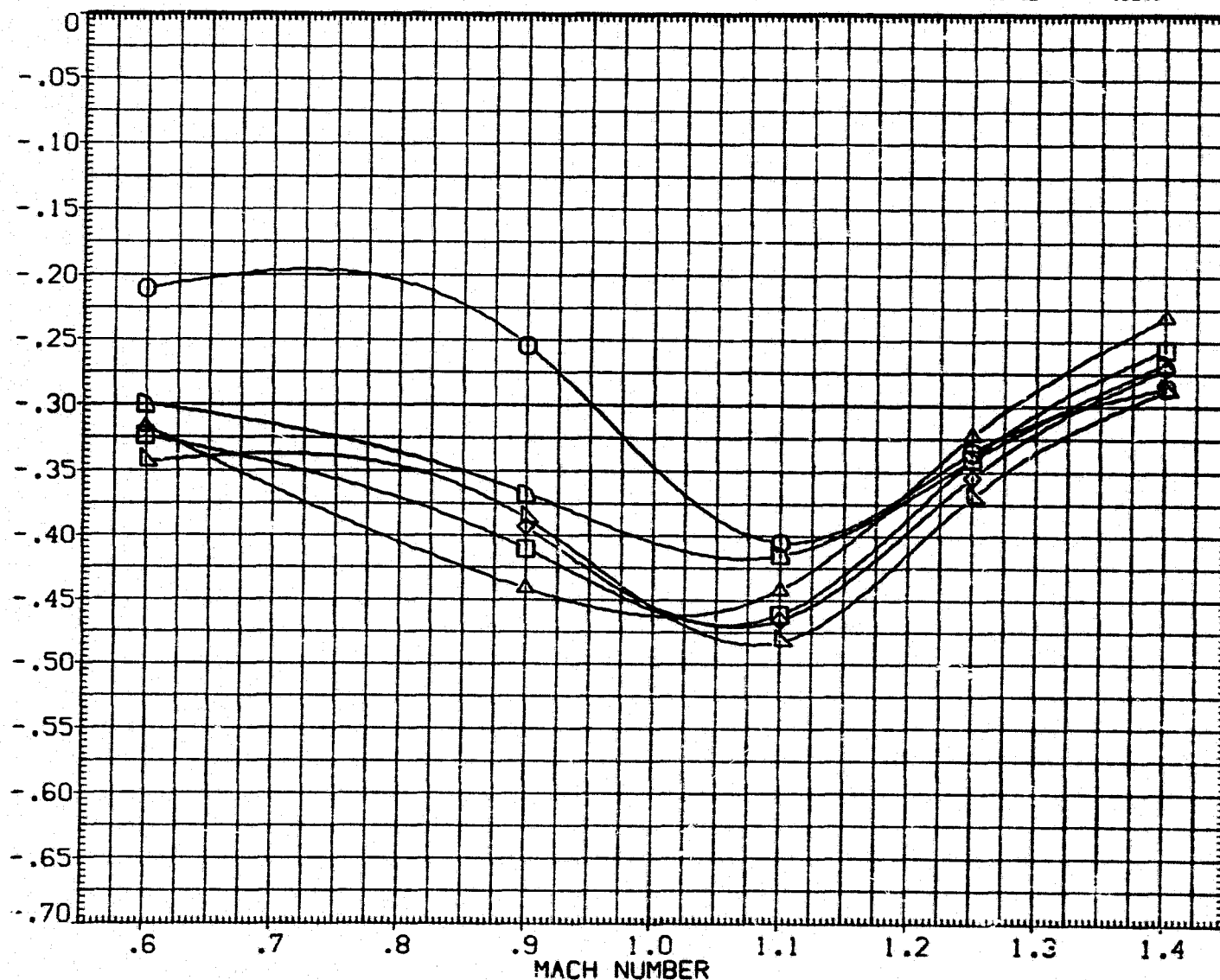


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BFTA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	YMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 717) ORBITER BASE. CP717

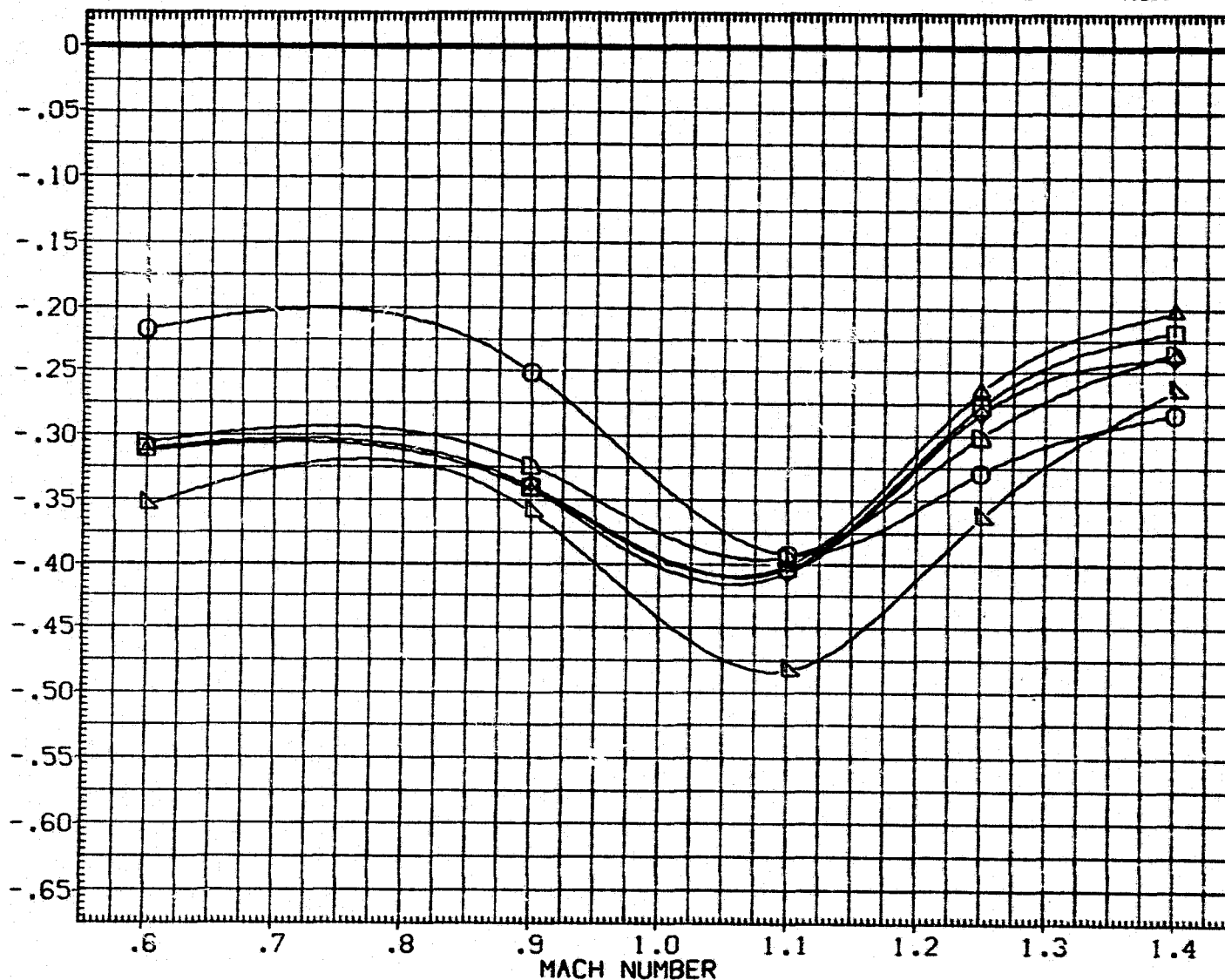


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 717) ORBITER BASE, CP717

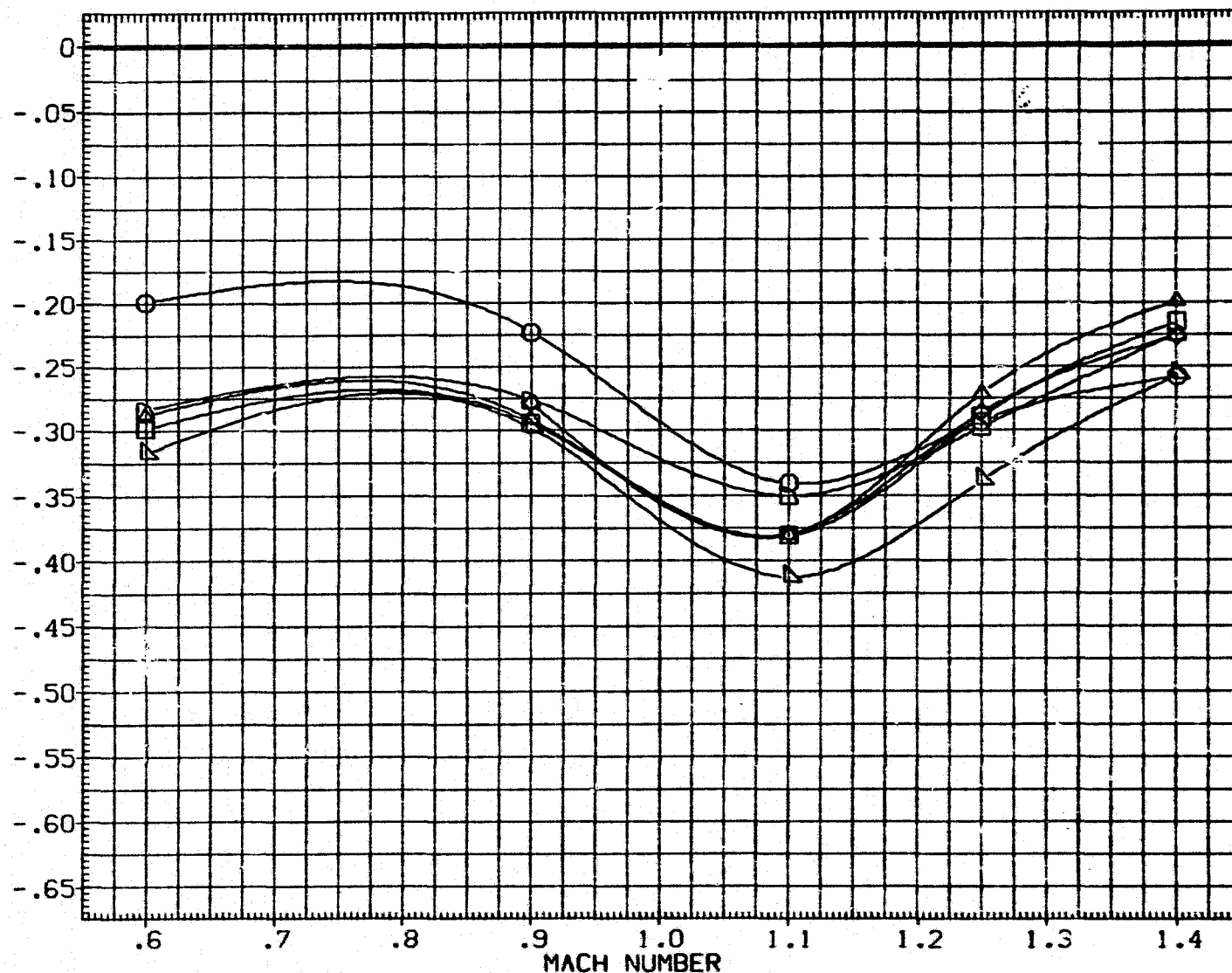


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
		.000	.000	.000	SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 717) ORBITER BASE, CP717

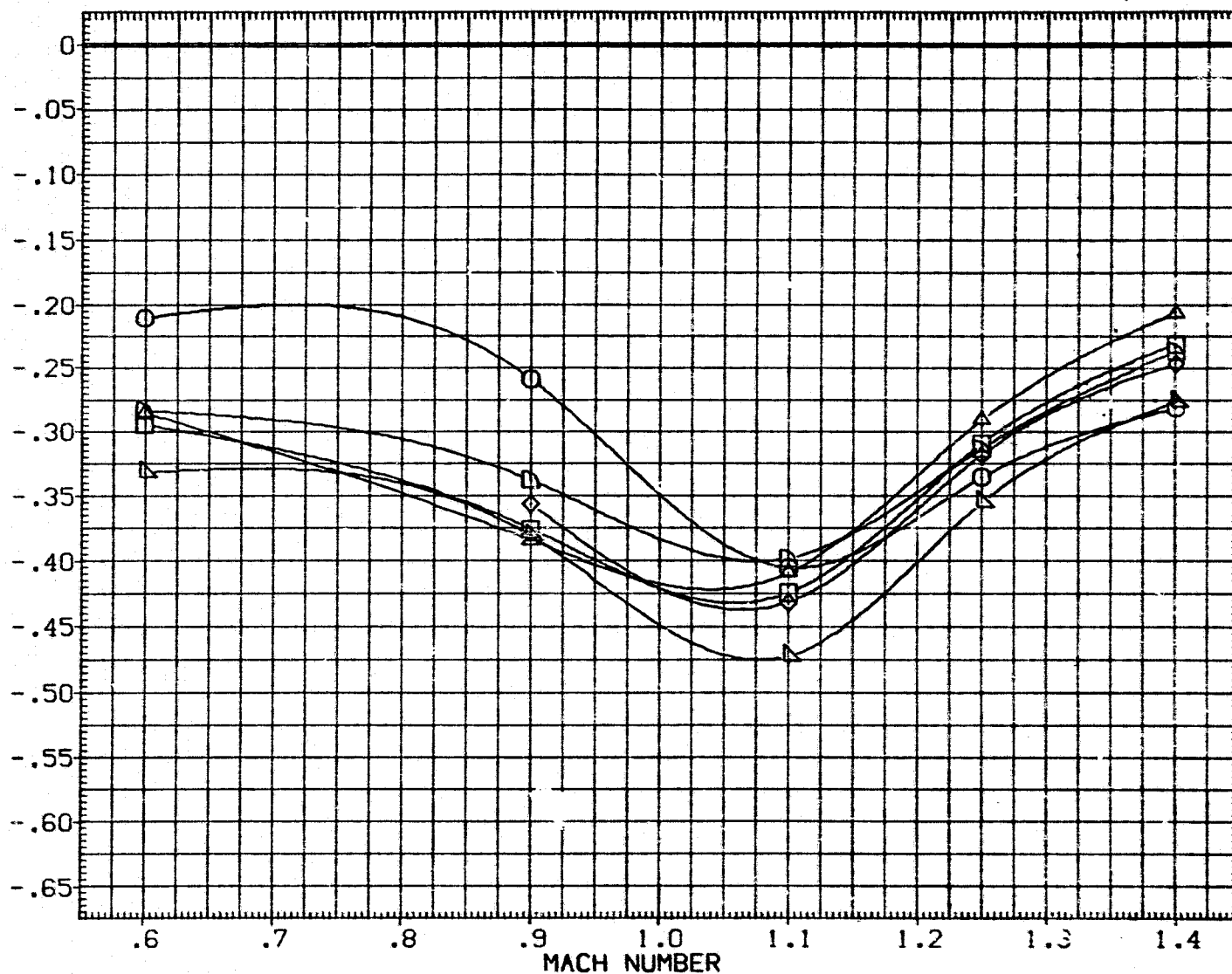


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 380) ORBITER BASE, CP380

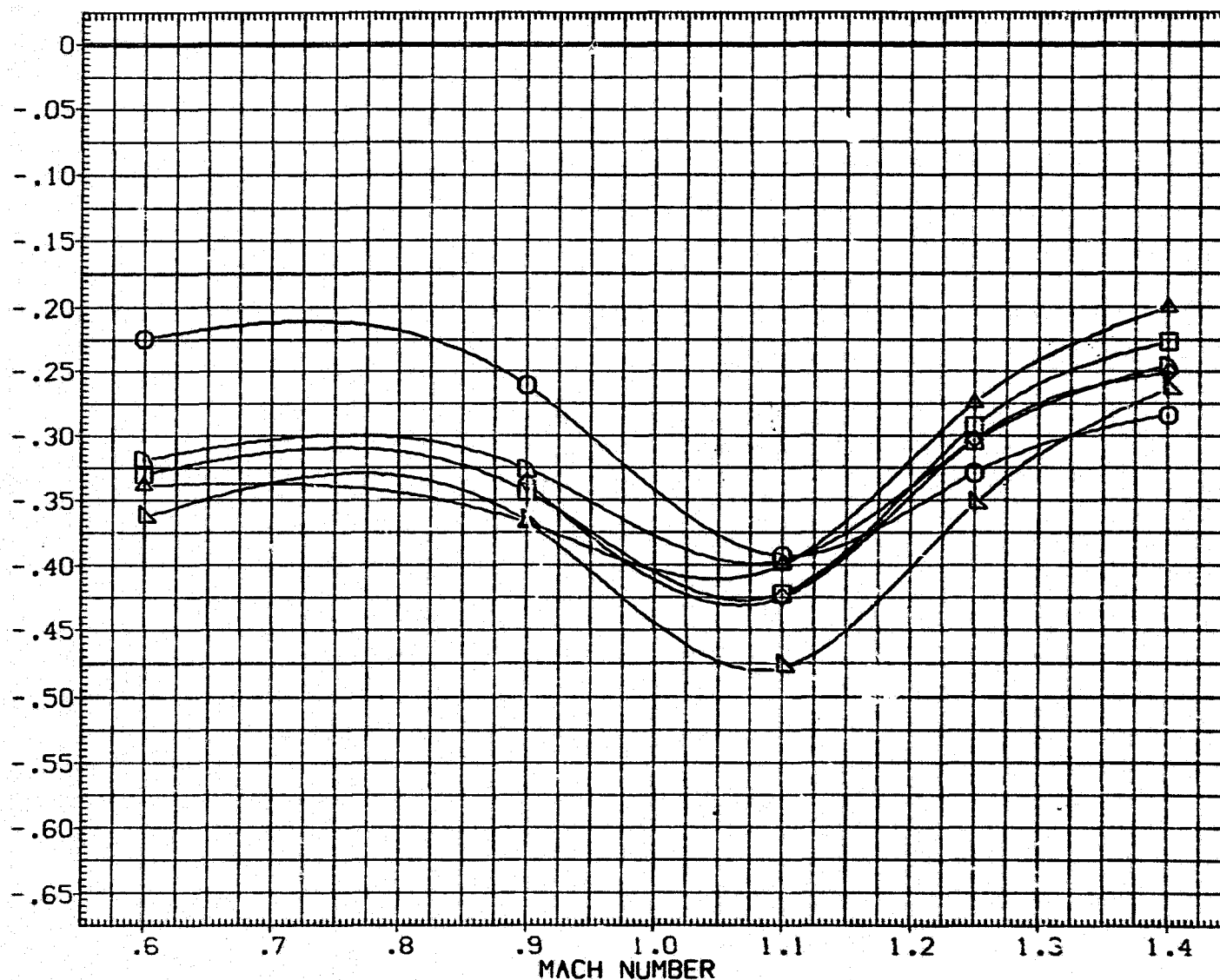


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 380) ORBITER BASE, CP380

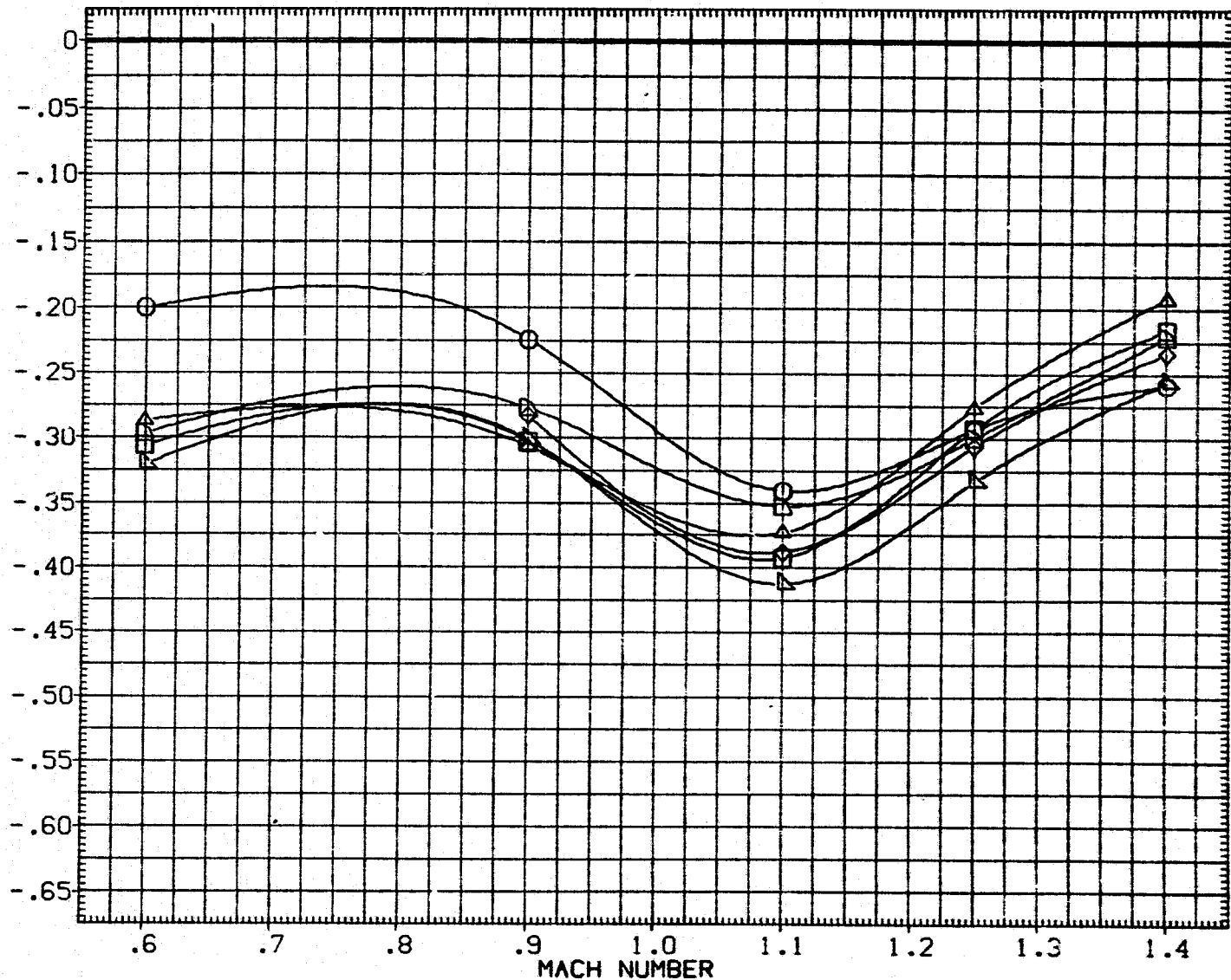


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 380) ORBITER BASE. CP380

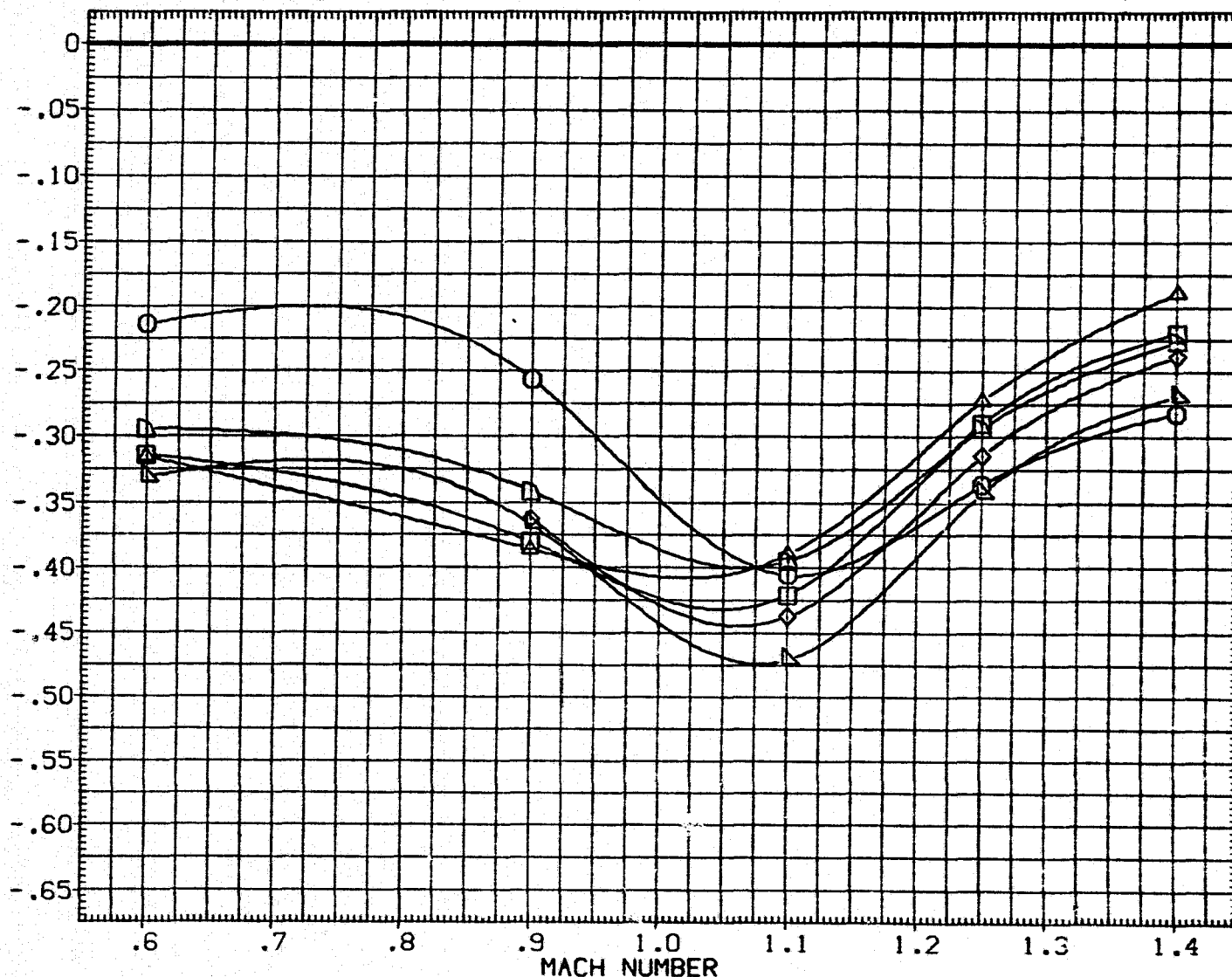


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 718) ORBITER BASE. CP718

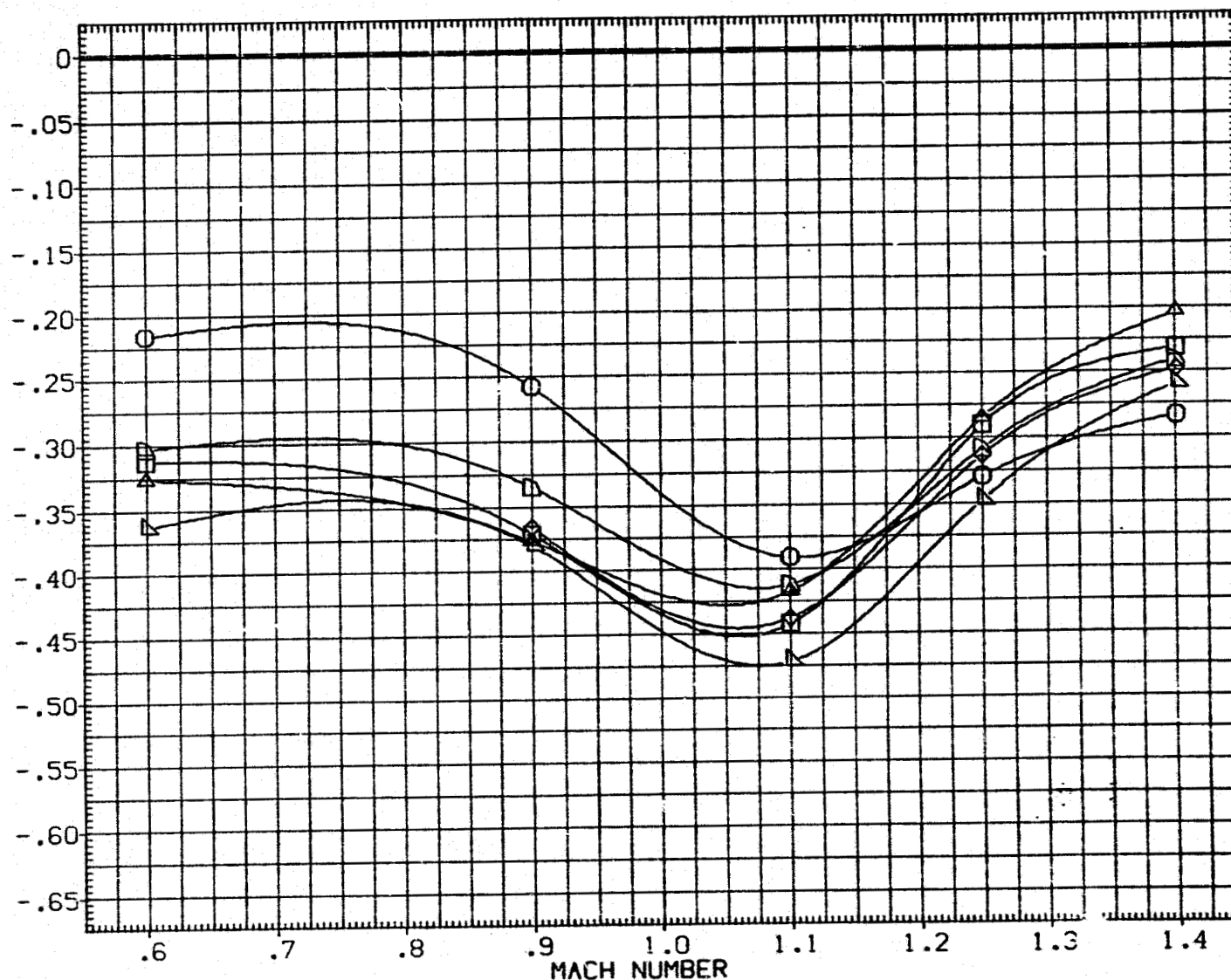


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 718) ORBITER BASE. CP718

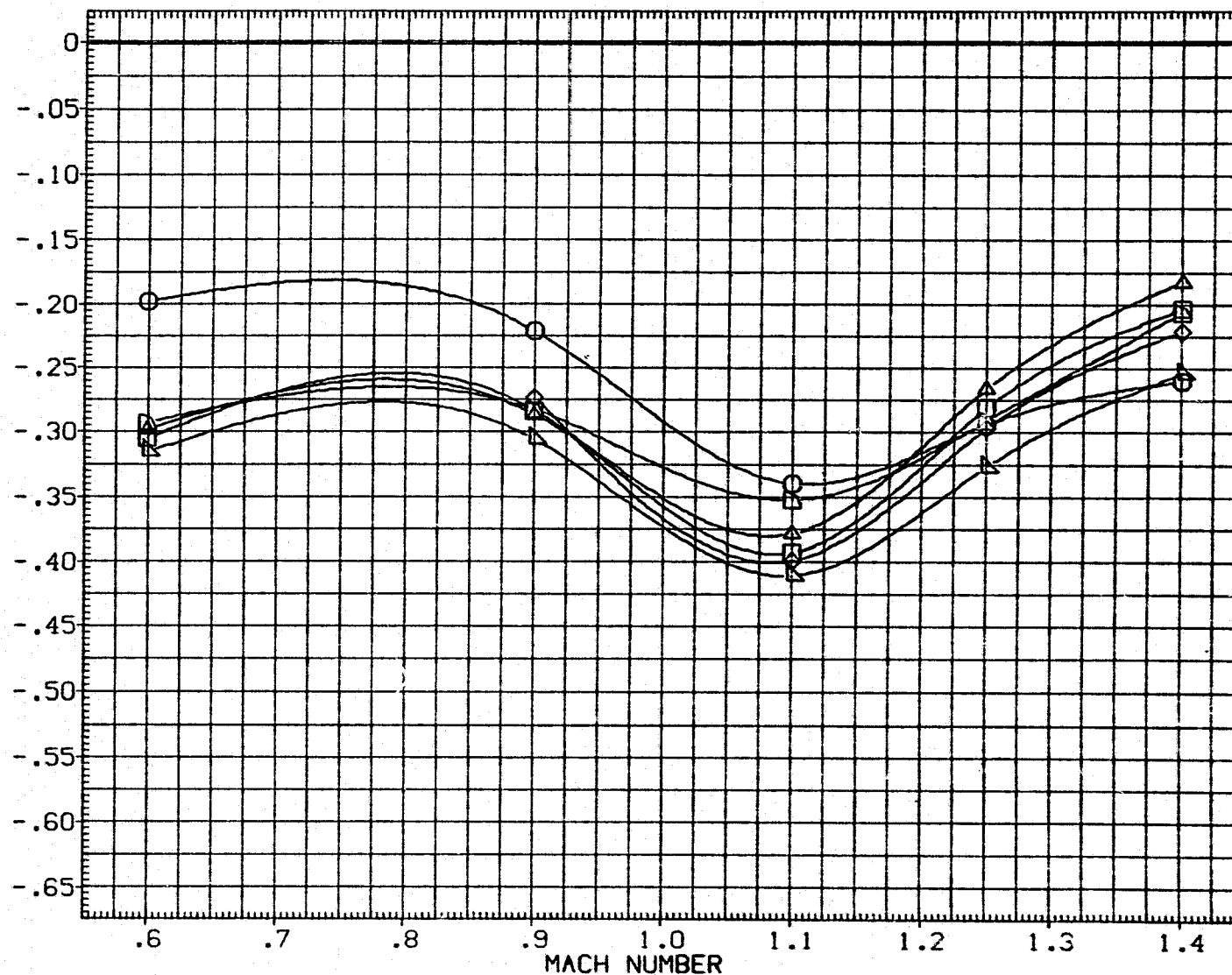


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 718) ORBITER BASE, CP718

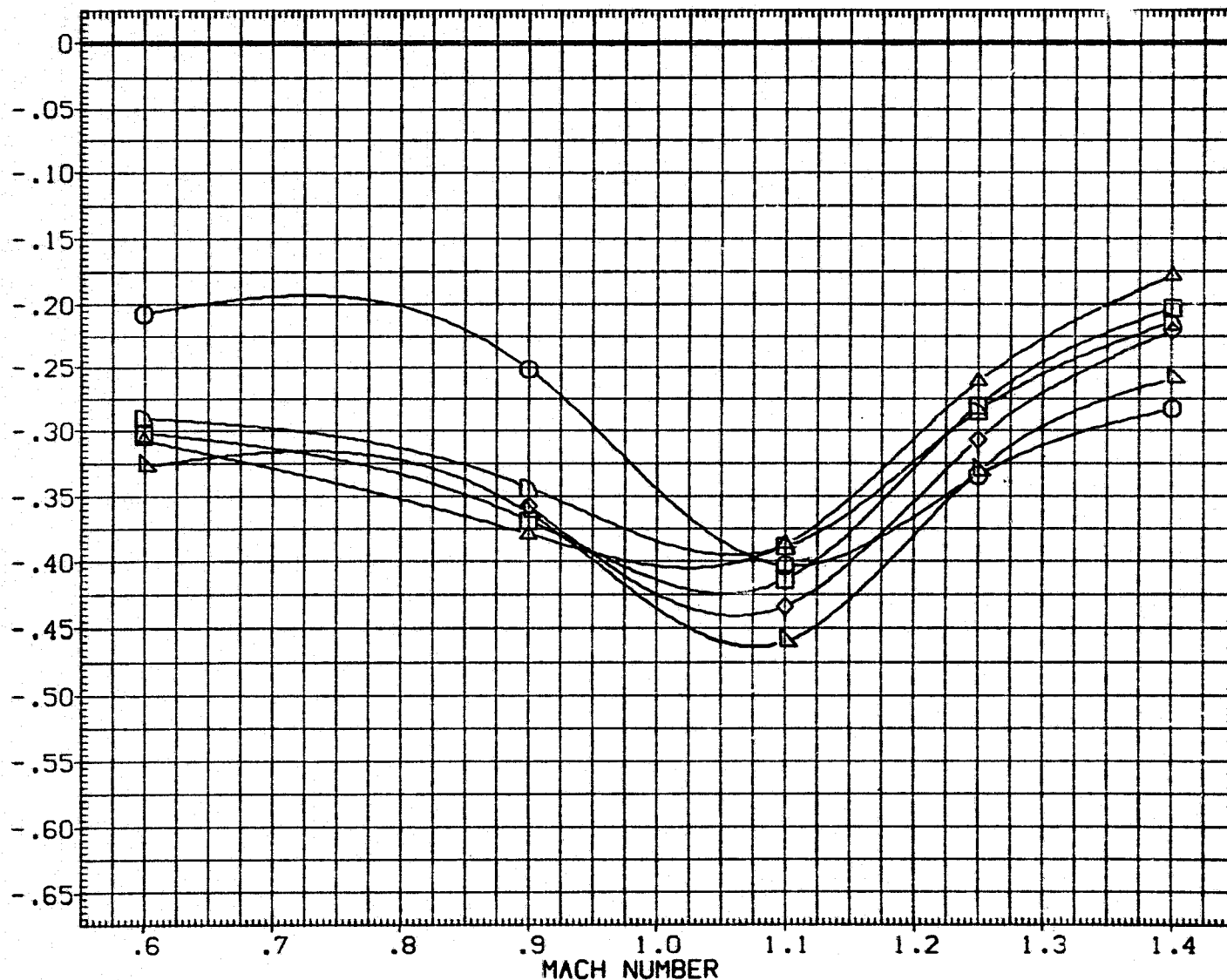


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.003	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 381) ORBITER BASE, CP381

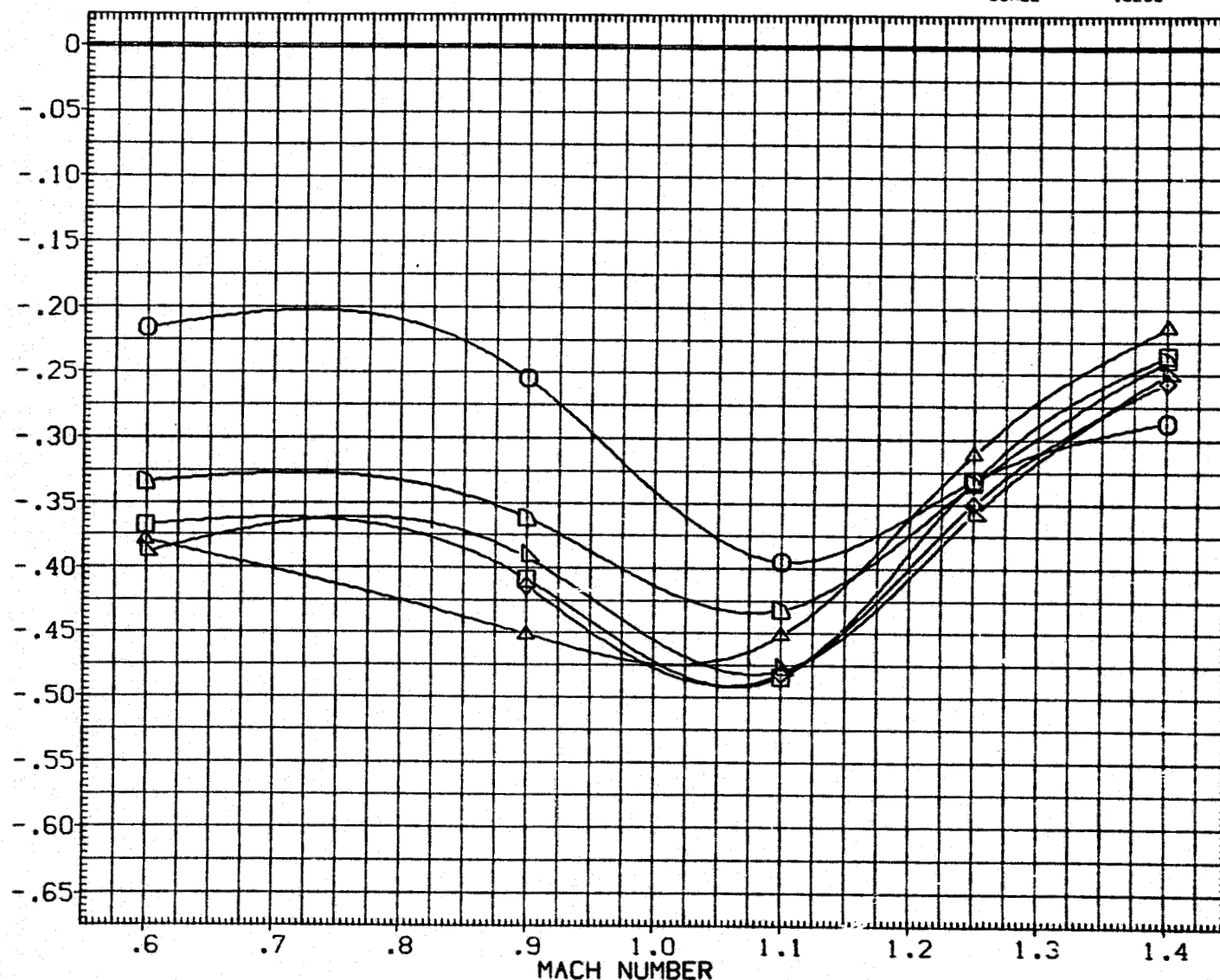


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 381) ORBITER BASE. CP381

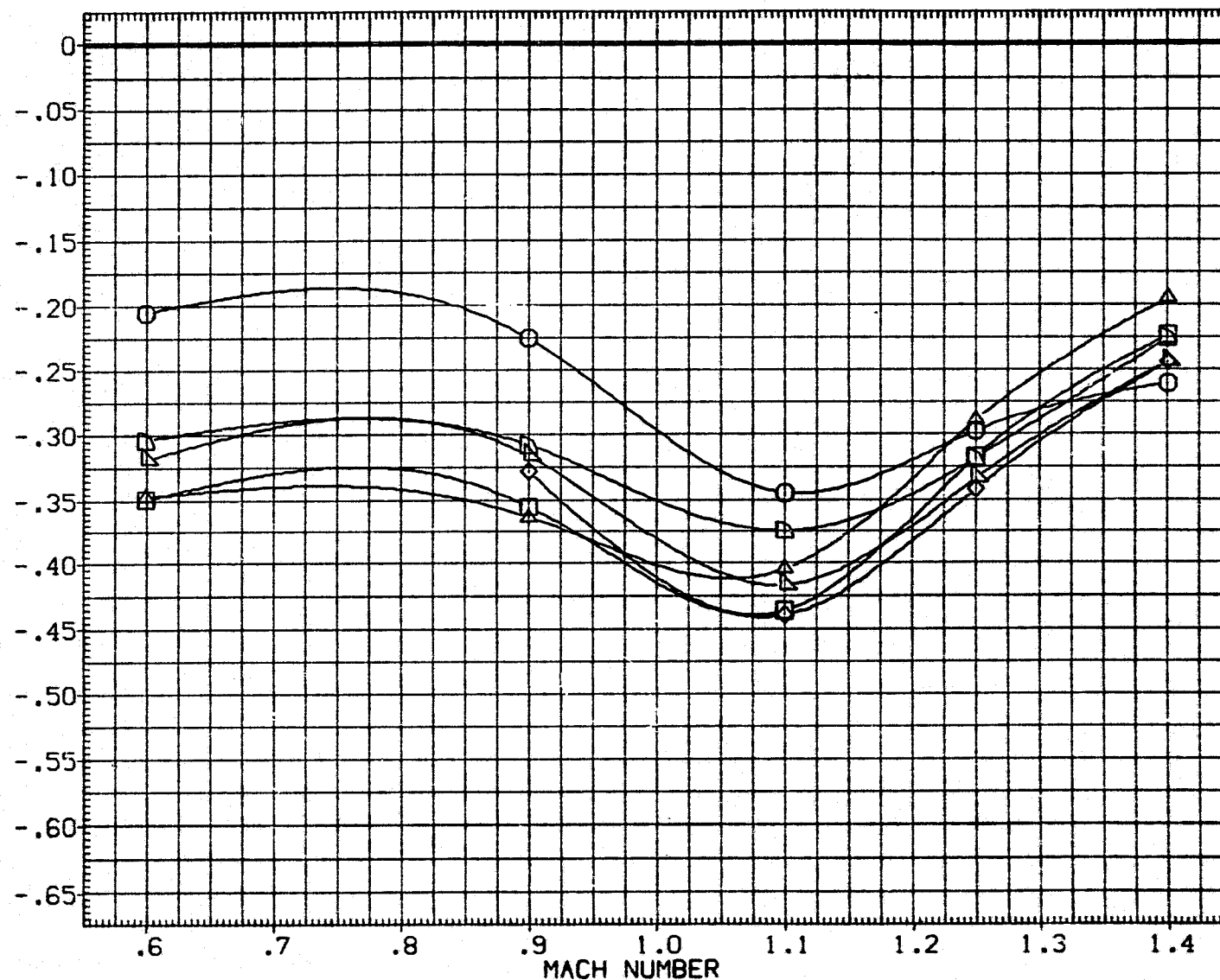


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 381) ORBITER BASE, CP381

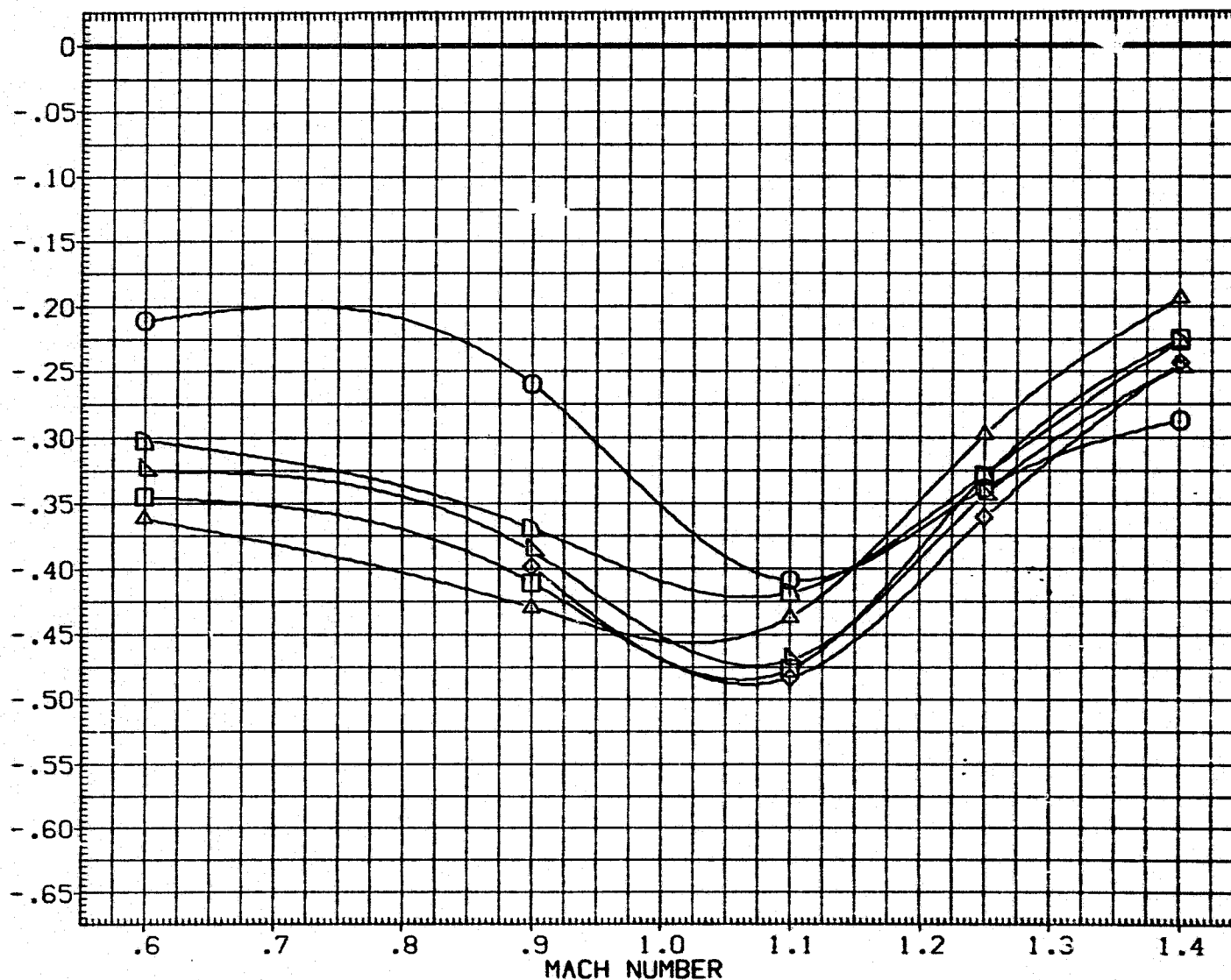


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 716) ORBITER BASE. CP716

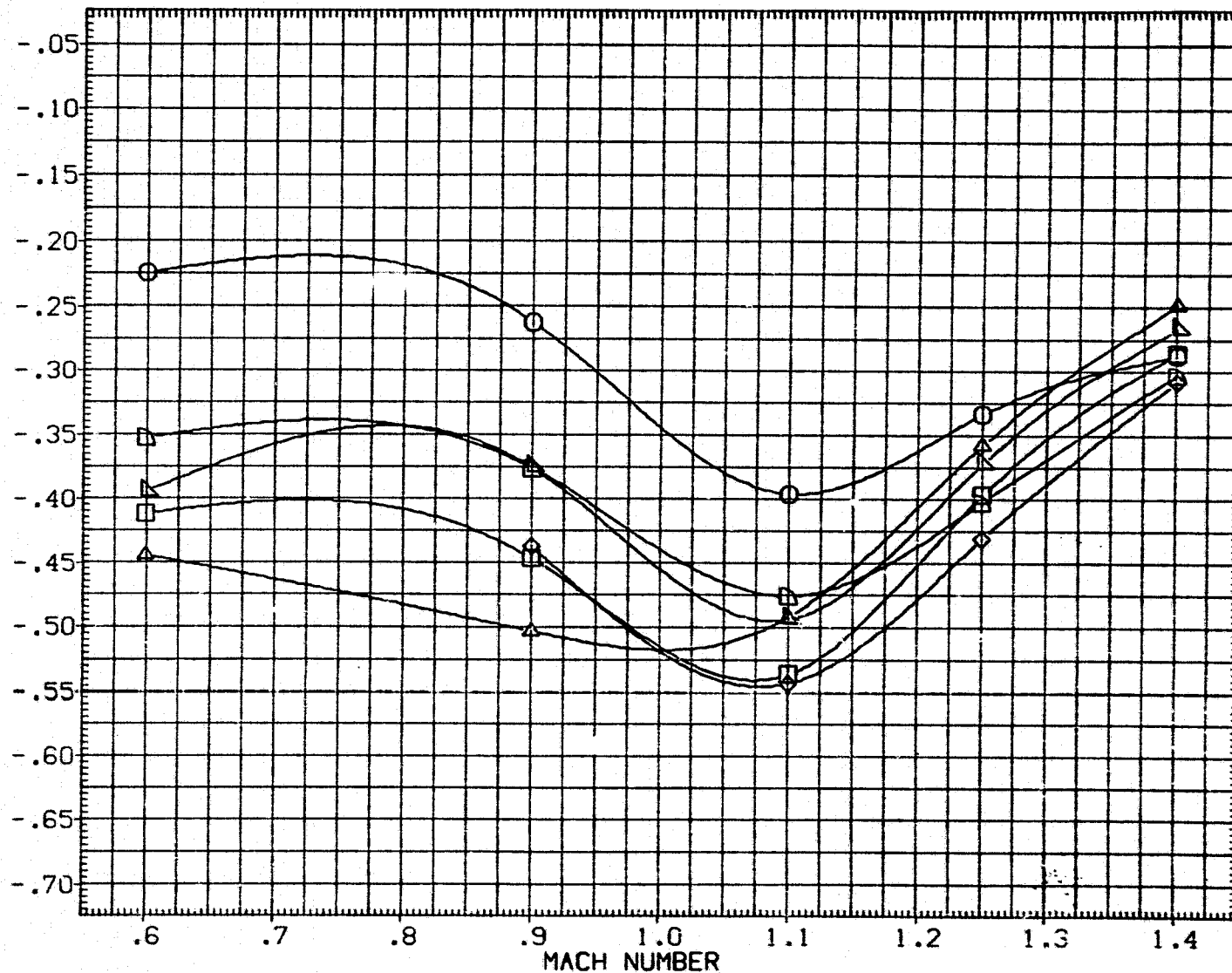


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

COEFFICIENT OF PRESSURE (TAP 716) ORBITER BASE, CP716

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-TB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

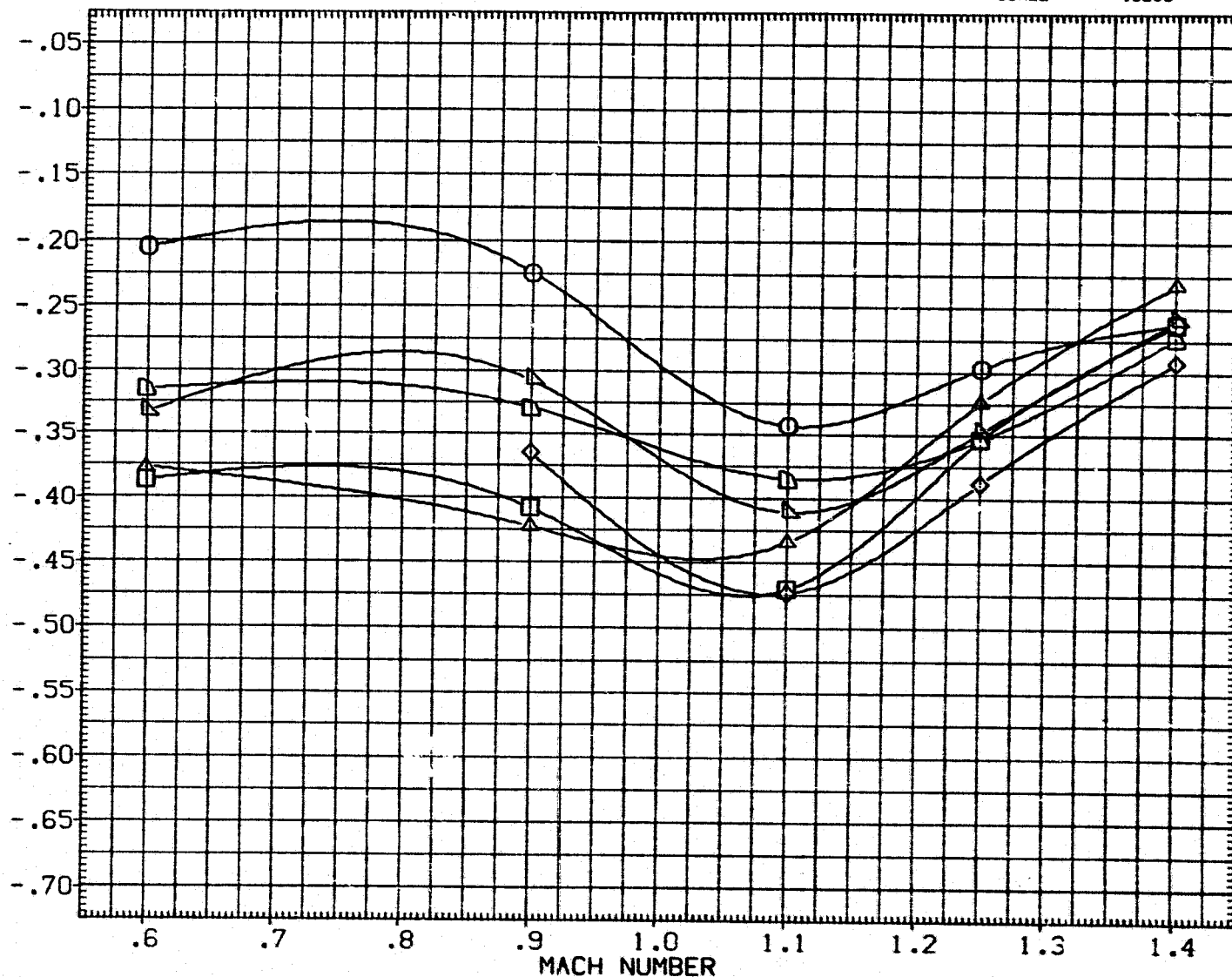


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2390.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 716) ORBITER BASE, CP716

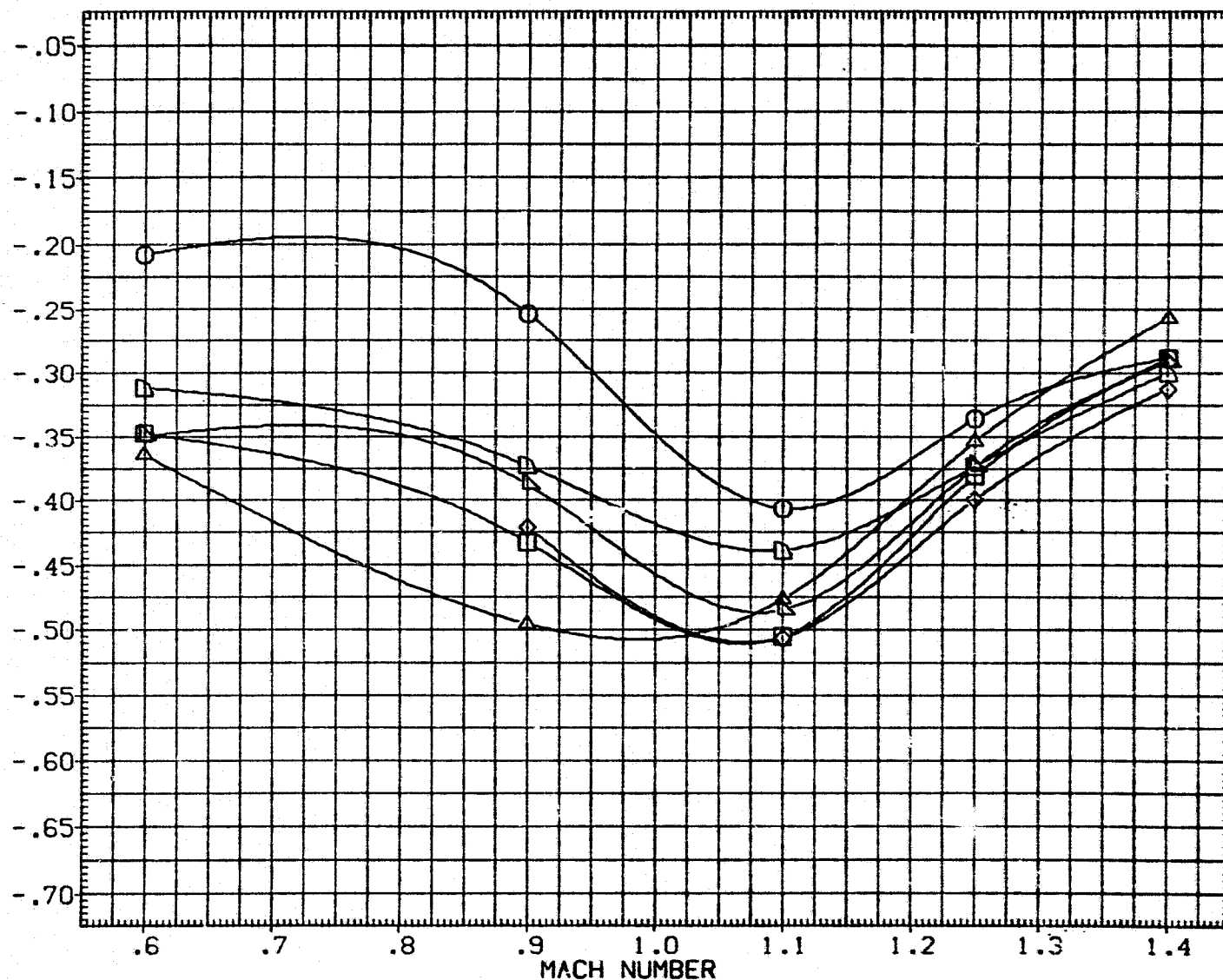


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 720) ORBITER BASE, CP720

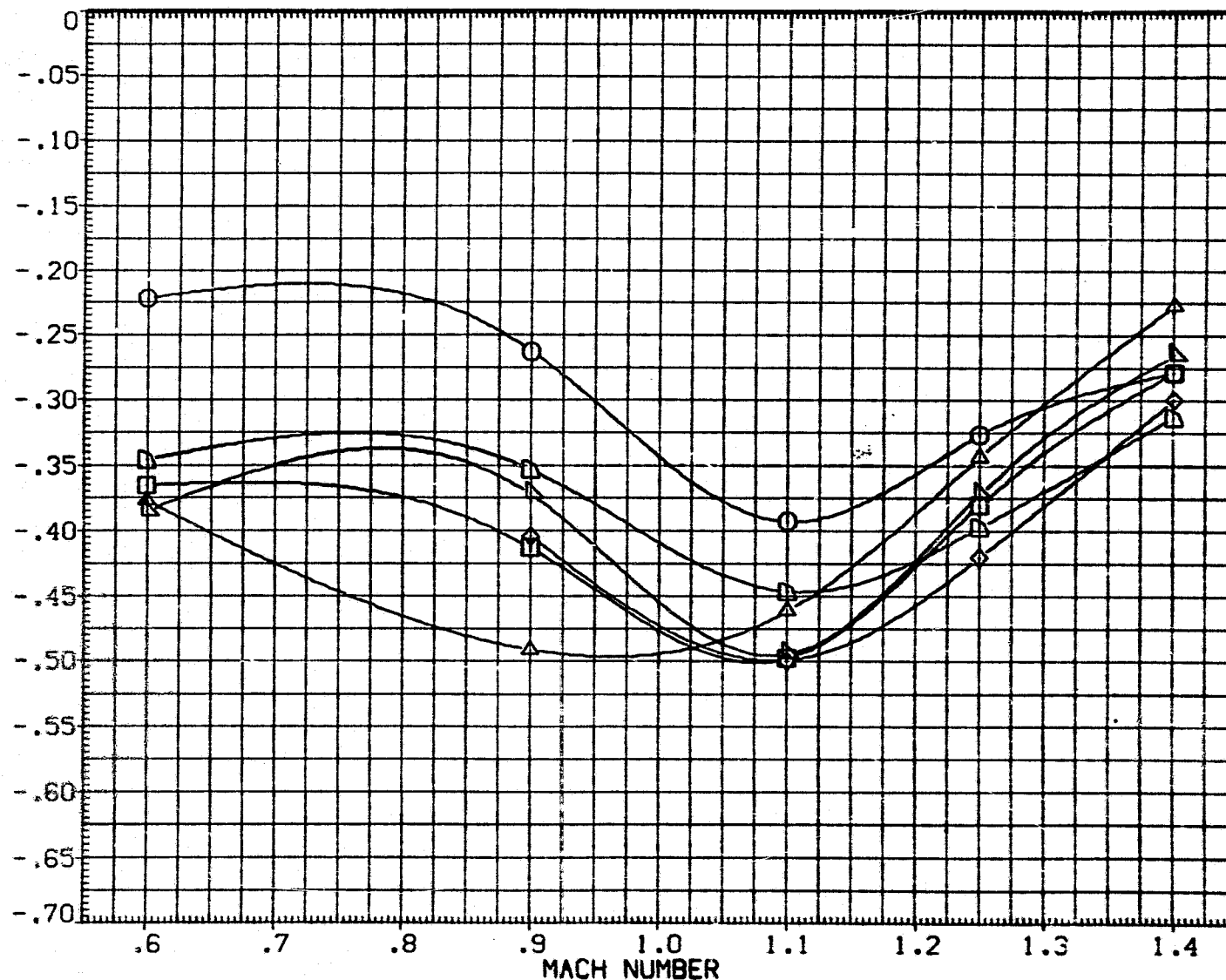


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SPB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0030	50 FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
		.000	.000	.000	SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 720) ORBITER BASE, CP720

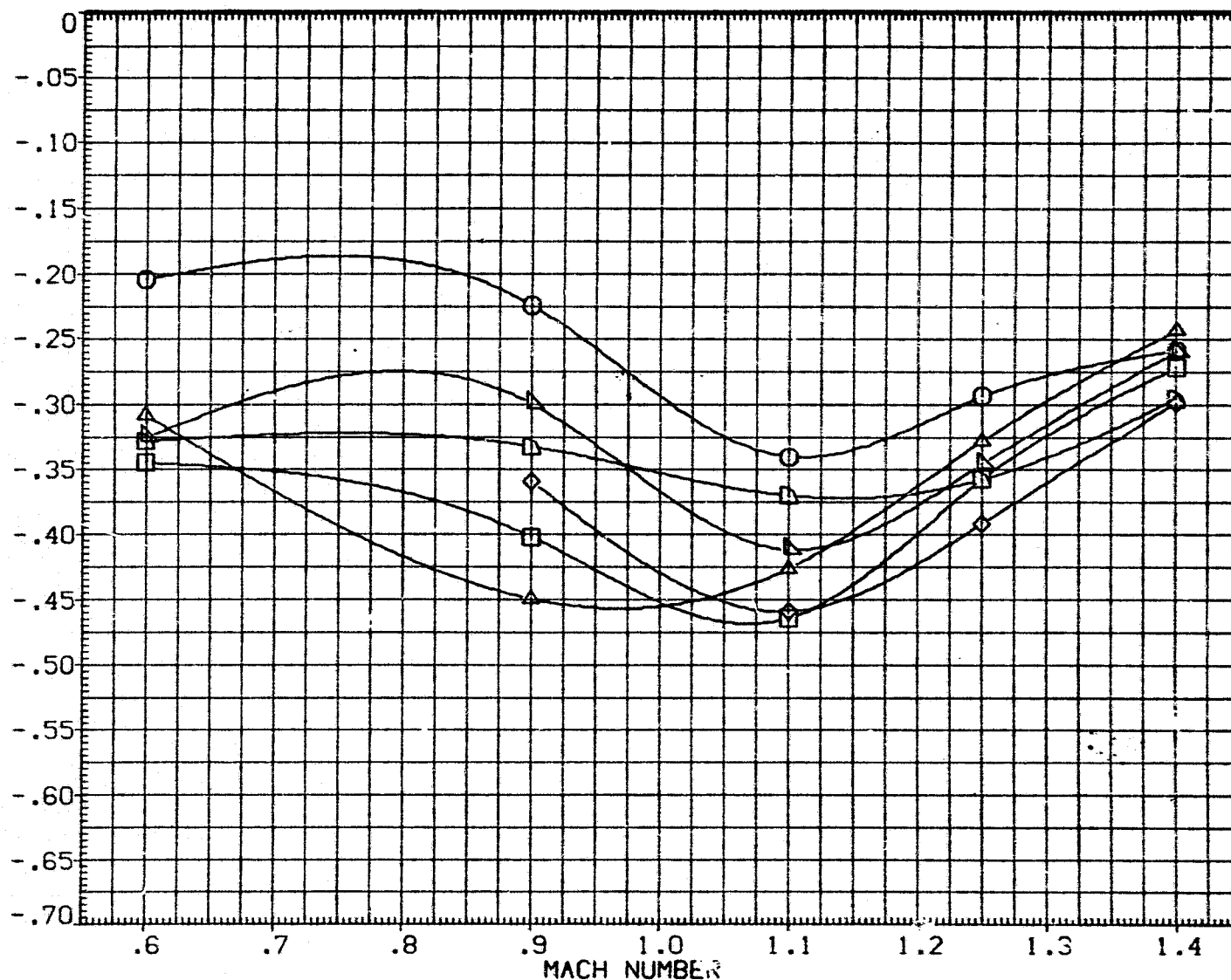


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 720) ORBITER BASE. CP720

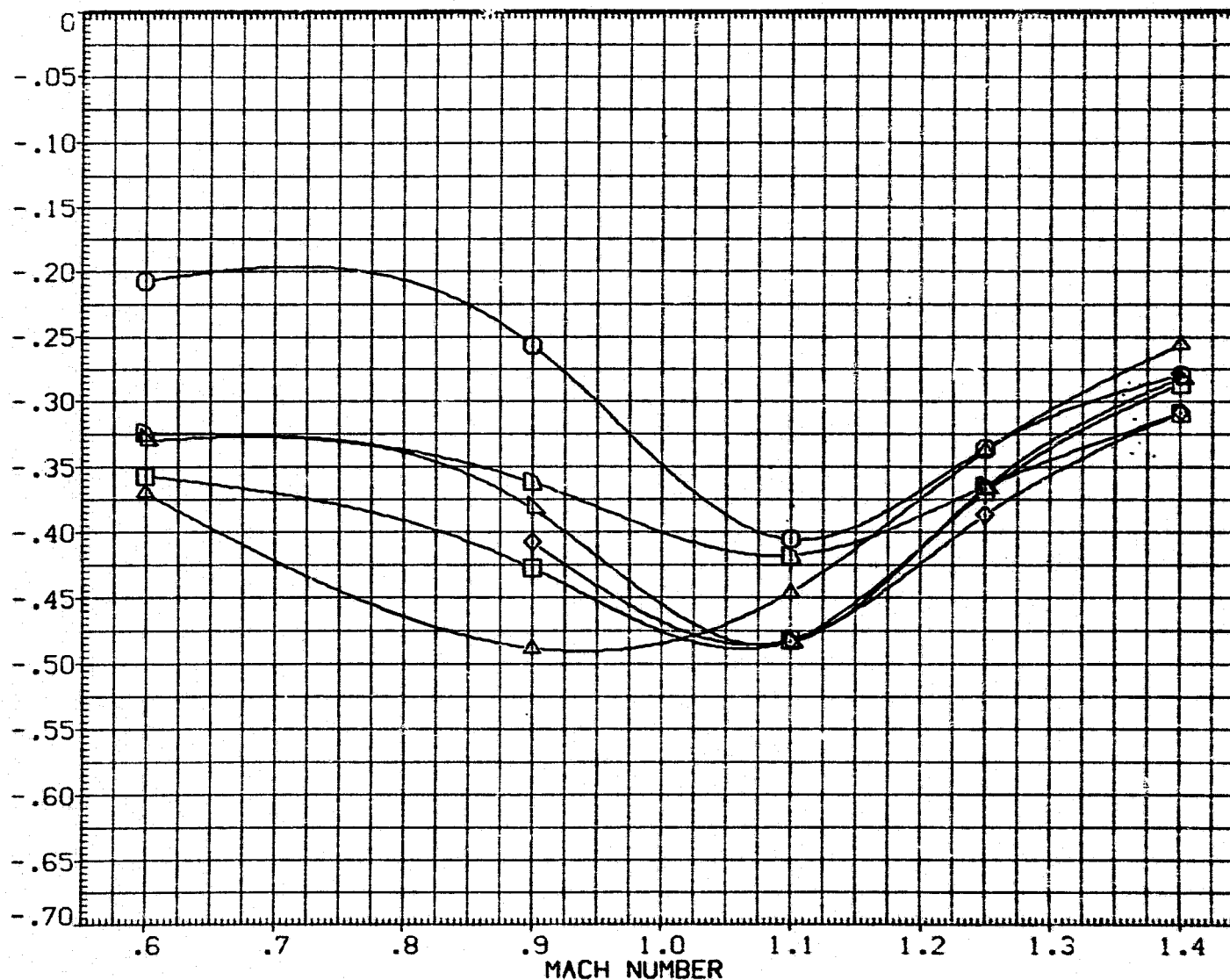


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C) BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 719) ORBITER BASE, CP719

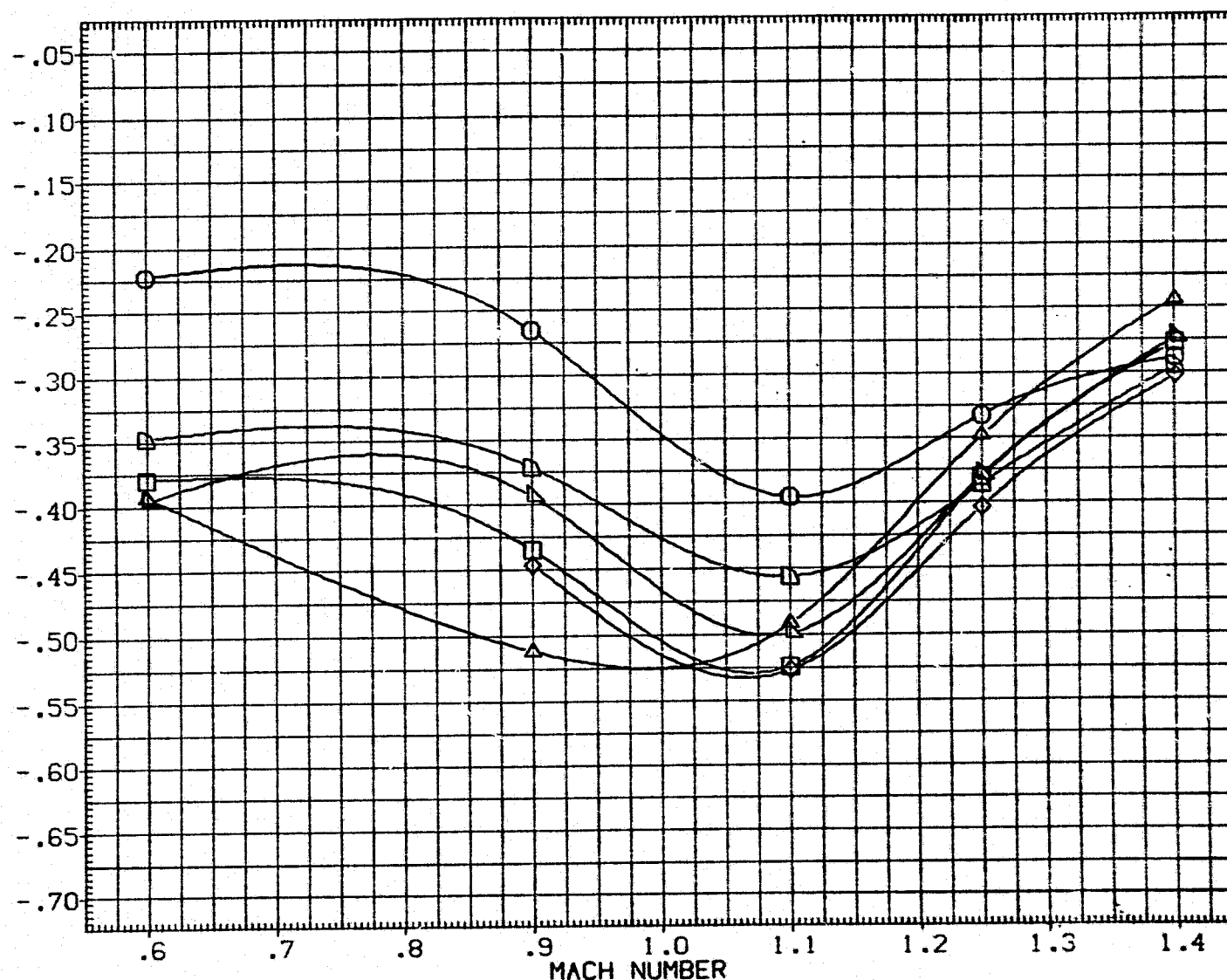


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(AE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(AE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 719) ORBITER BASE, CP719

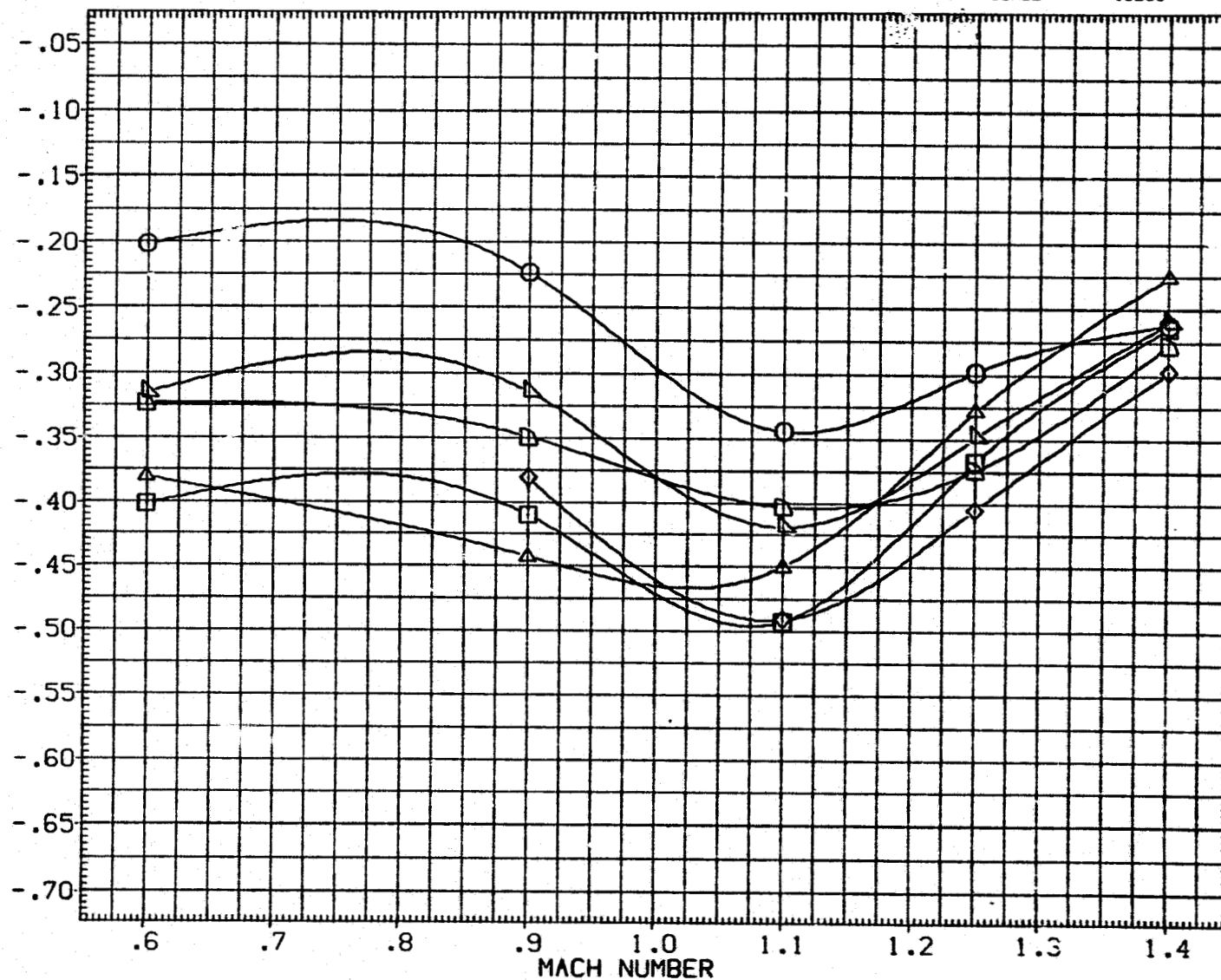


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 719) ORBITER BASE, CP719

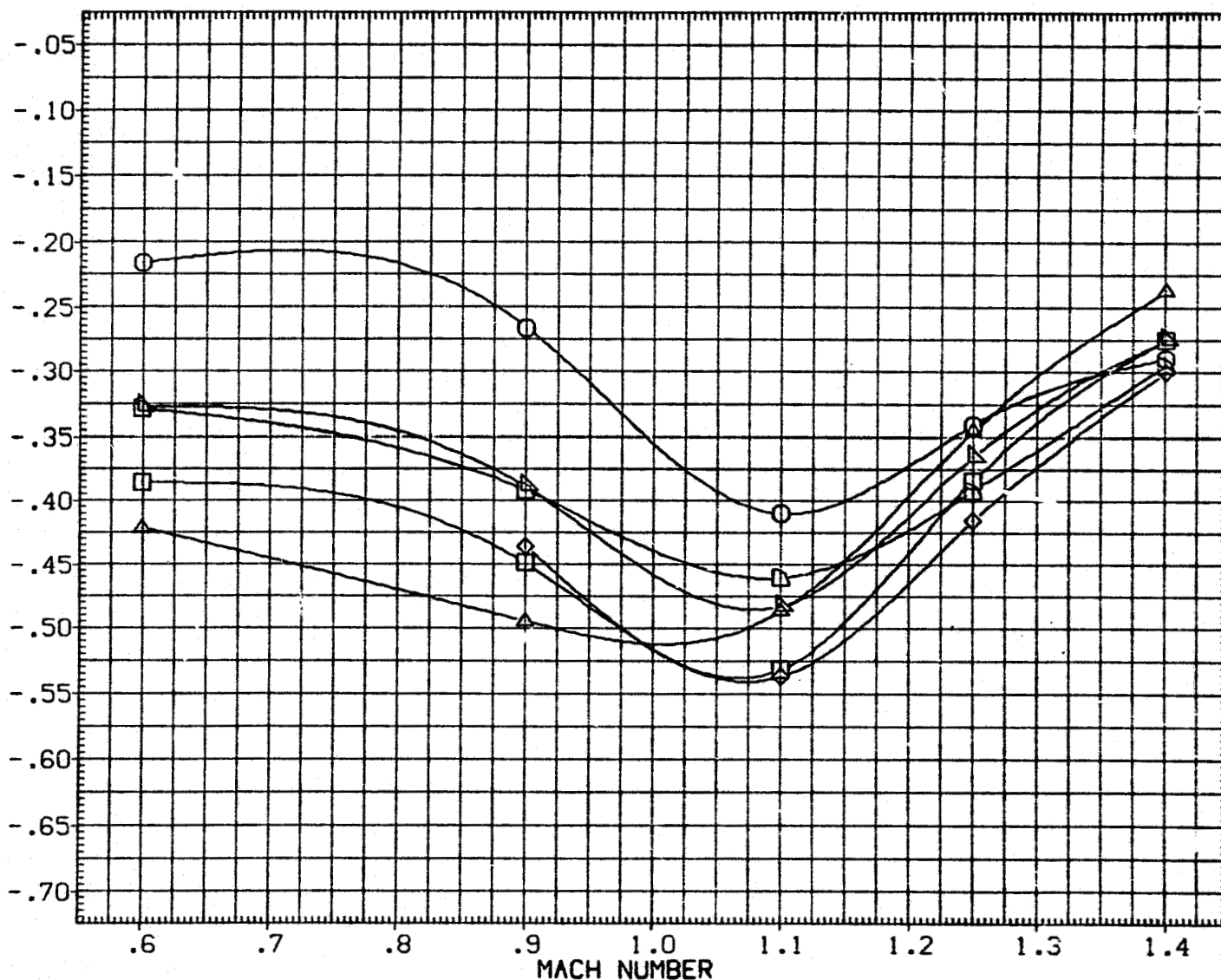


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C) BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 374) ORBITER BASE, CP374

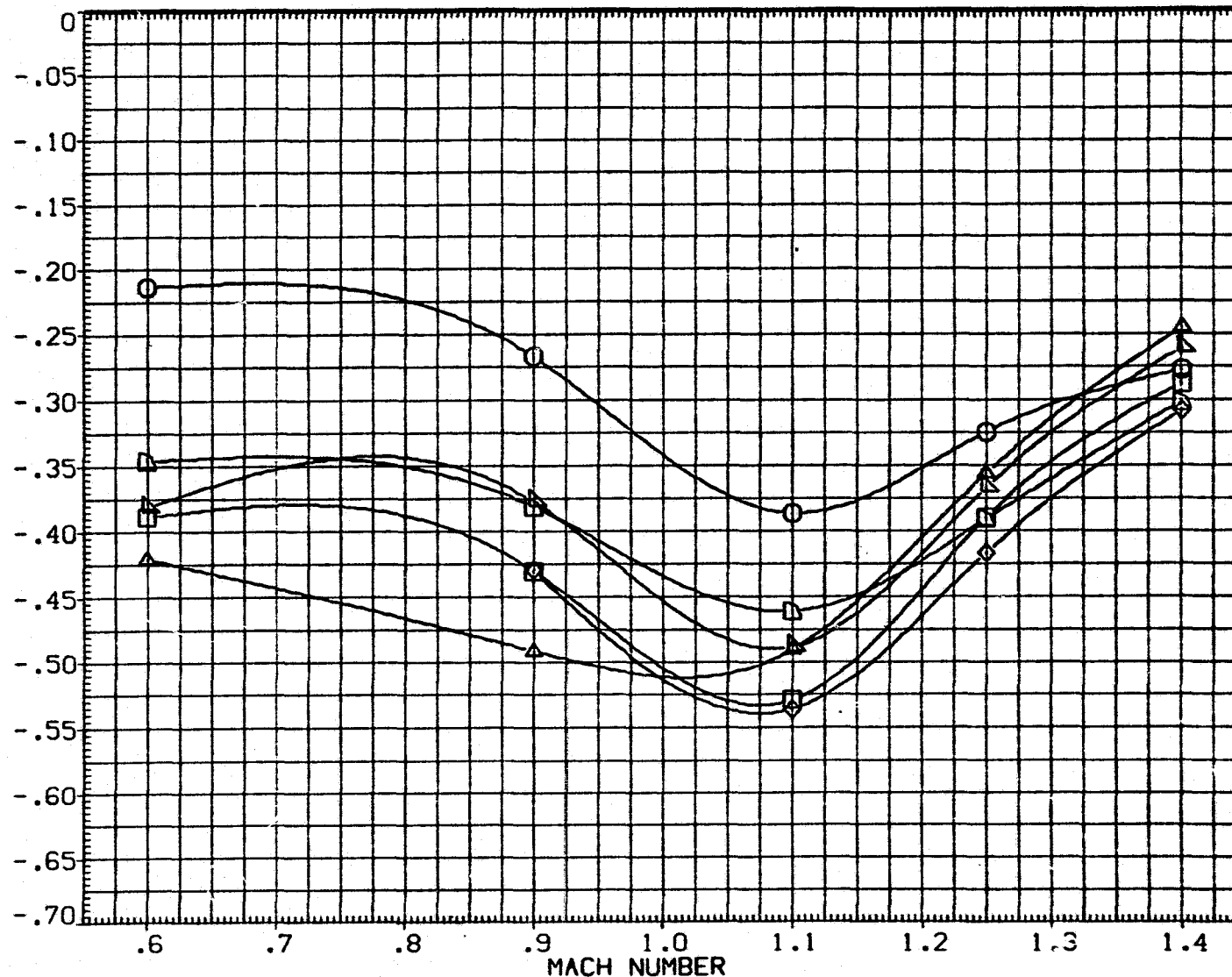


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4028)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(AE4020)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(AE4016)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(AE4011)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(AE4080)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(AE4085)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

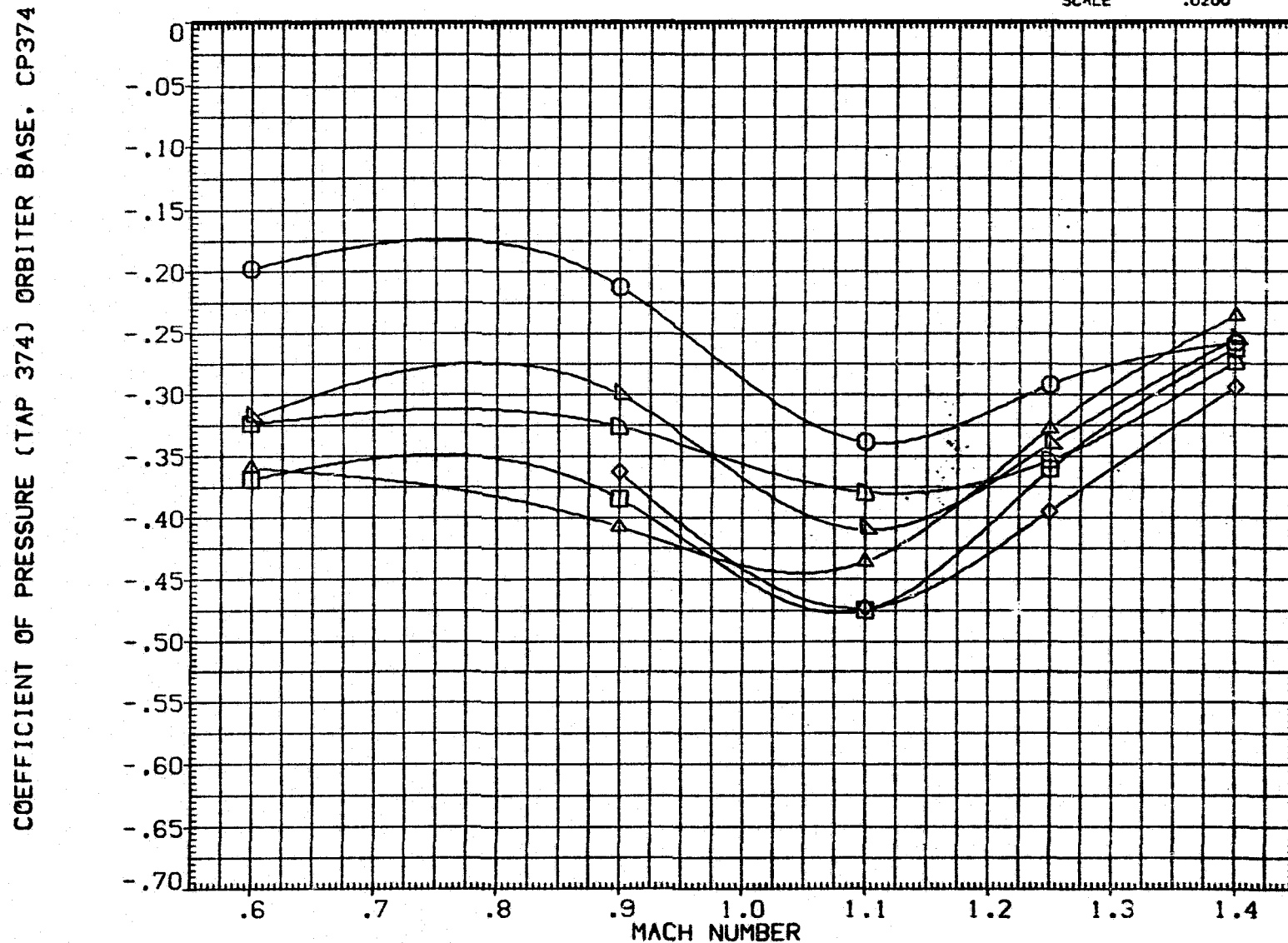


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XM RP	.0000	IN.
(AE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YM RP	.0000	IN.
(AE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZM RP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 374) ORBITER BASE, CP374

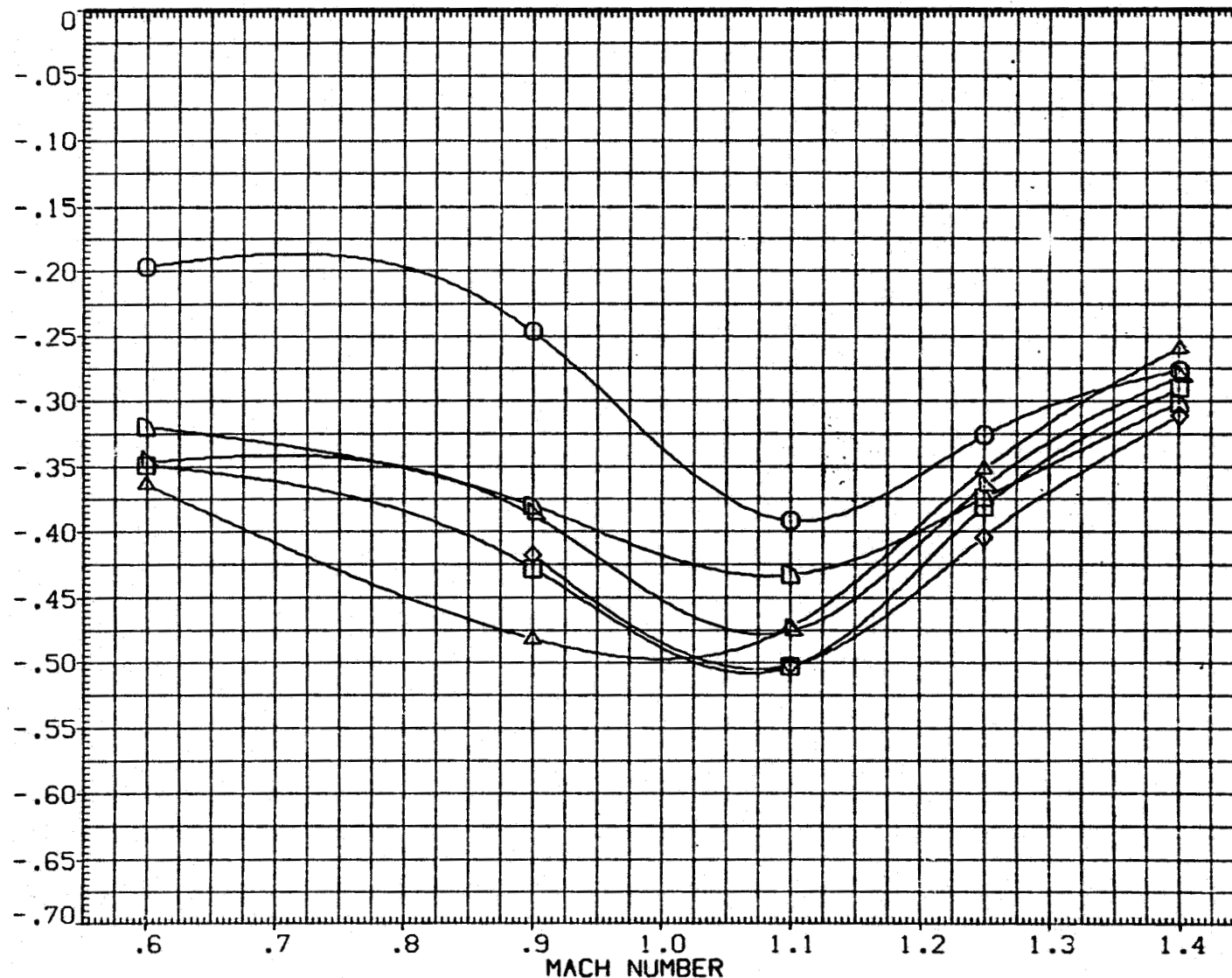


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 376) ORBITER BASE. CP376

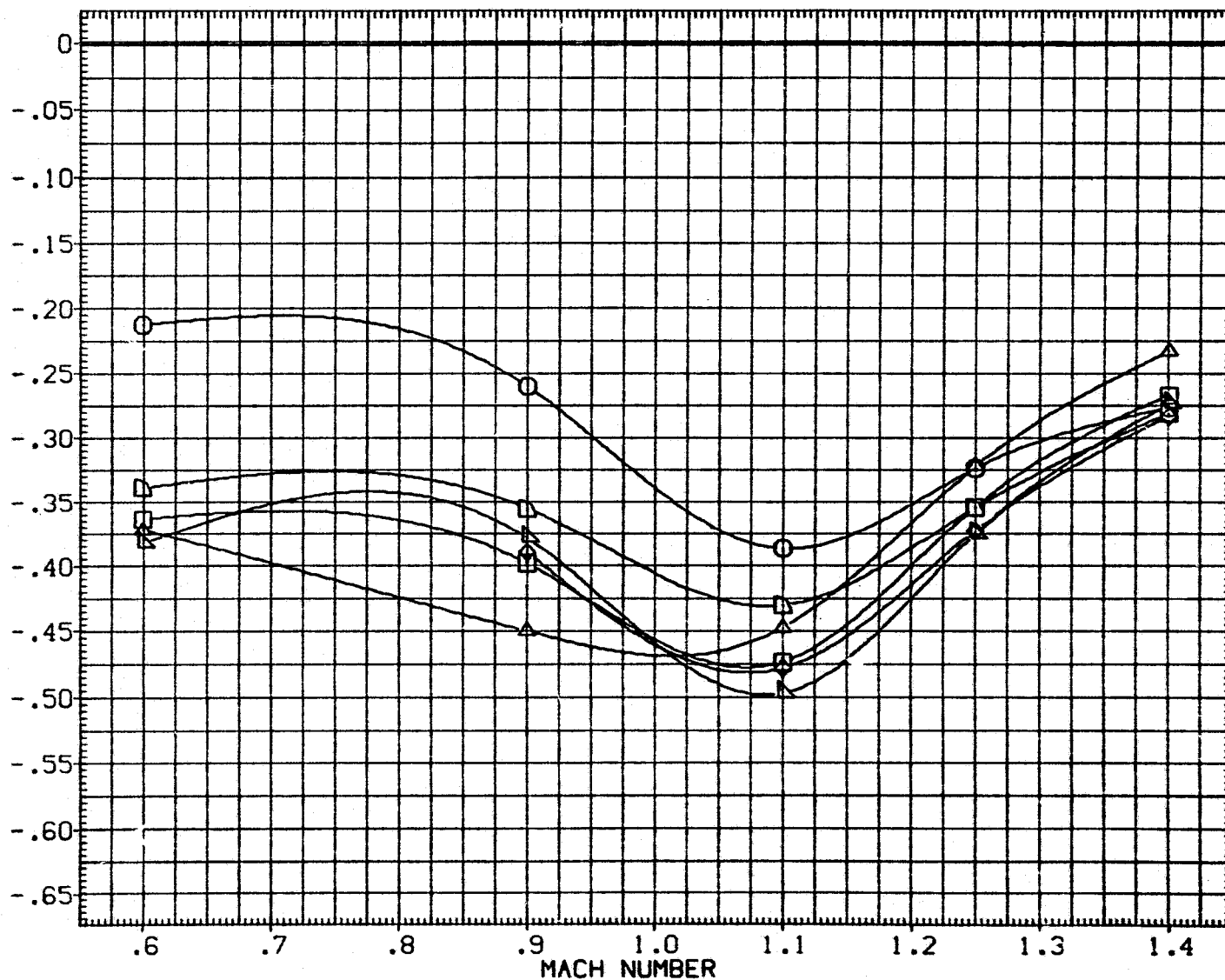


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRF	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRF	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRF	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 376) ORBITER BASE, CP376

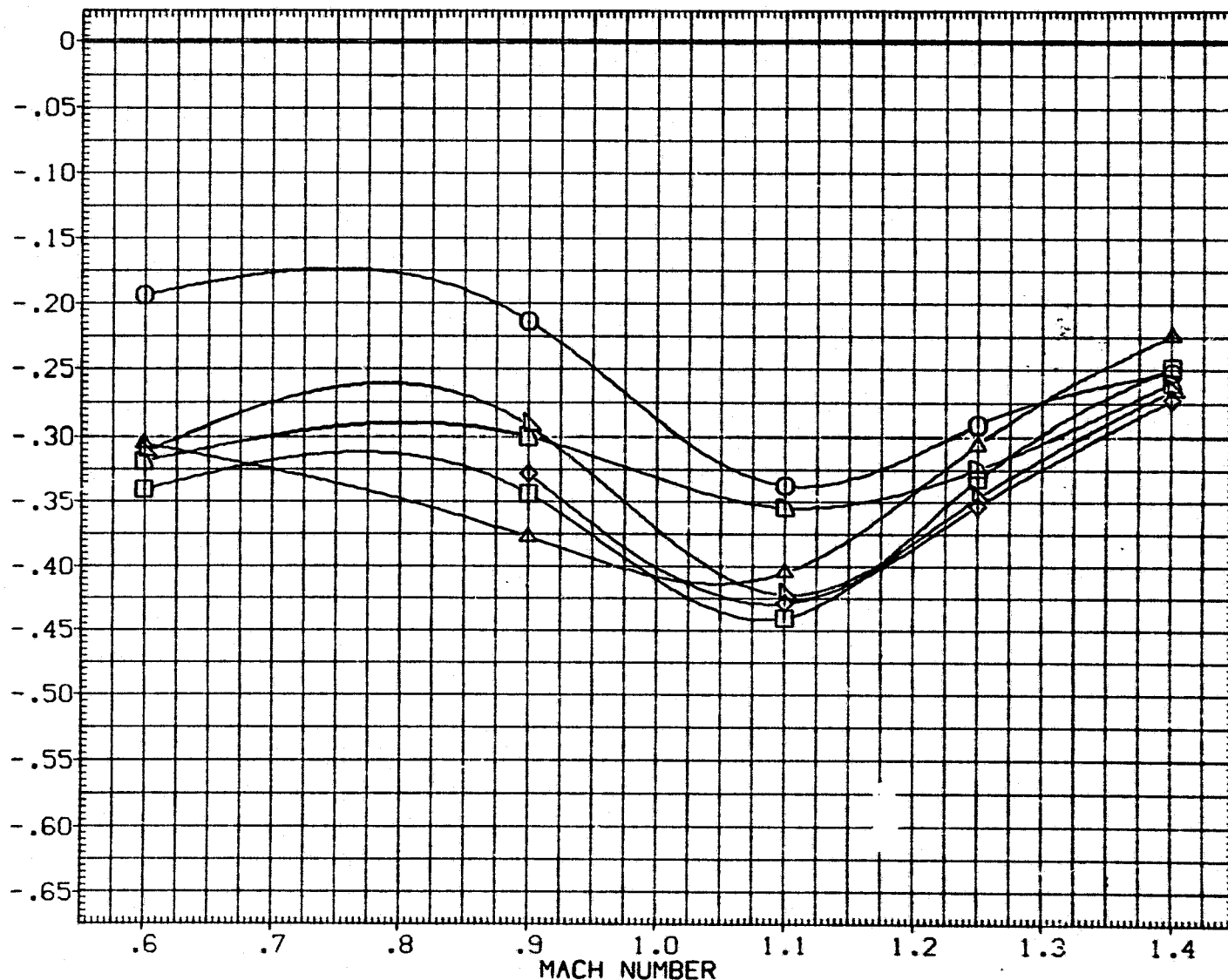


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(AE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(AE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(AE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(AE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(AE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 376) ORBITER BASE. CP376

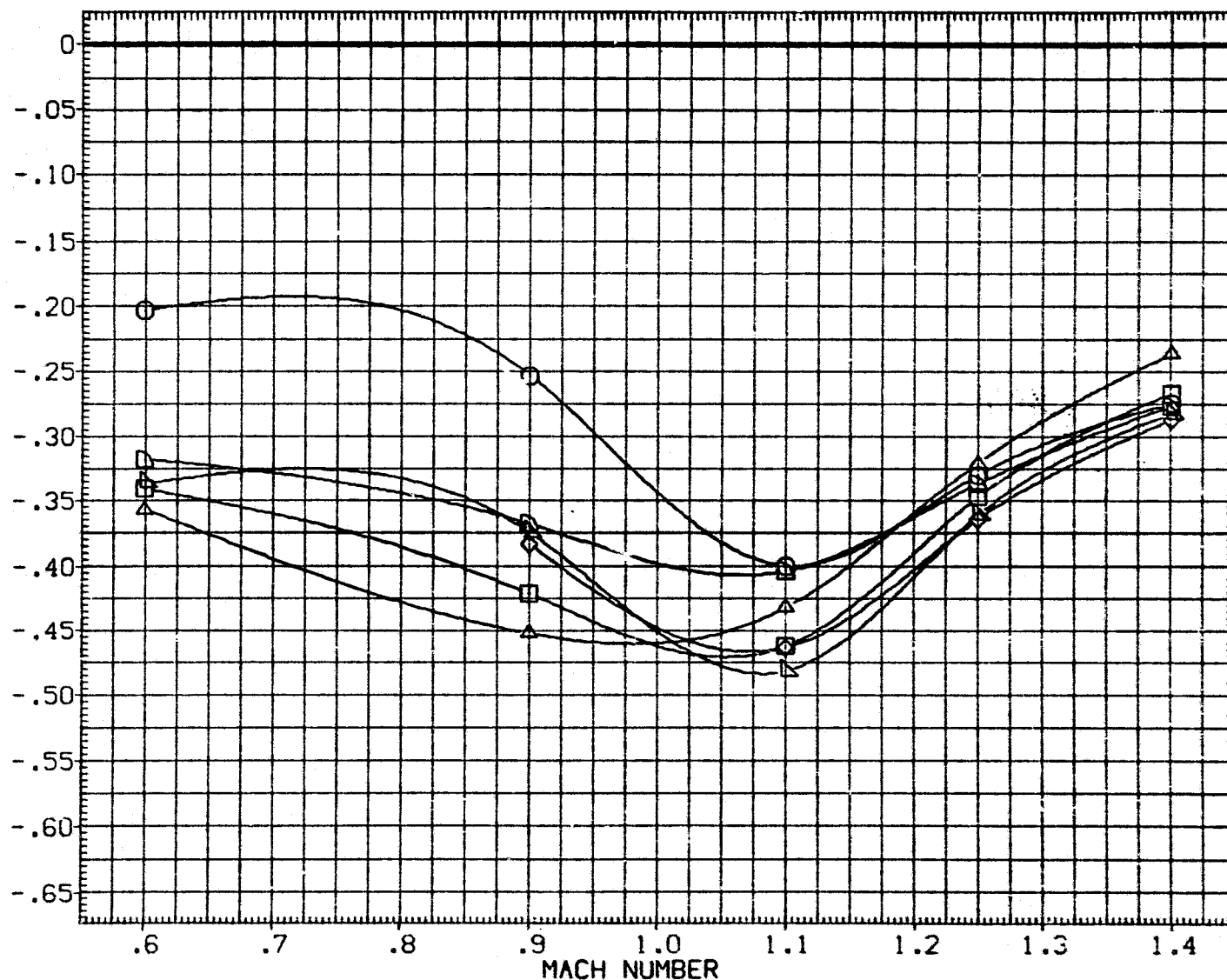


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 378) ORBITER BASE. CP378

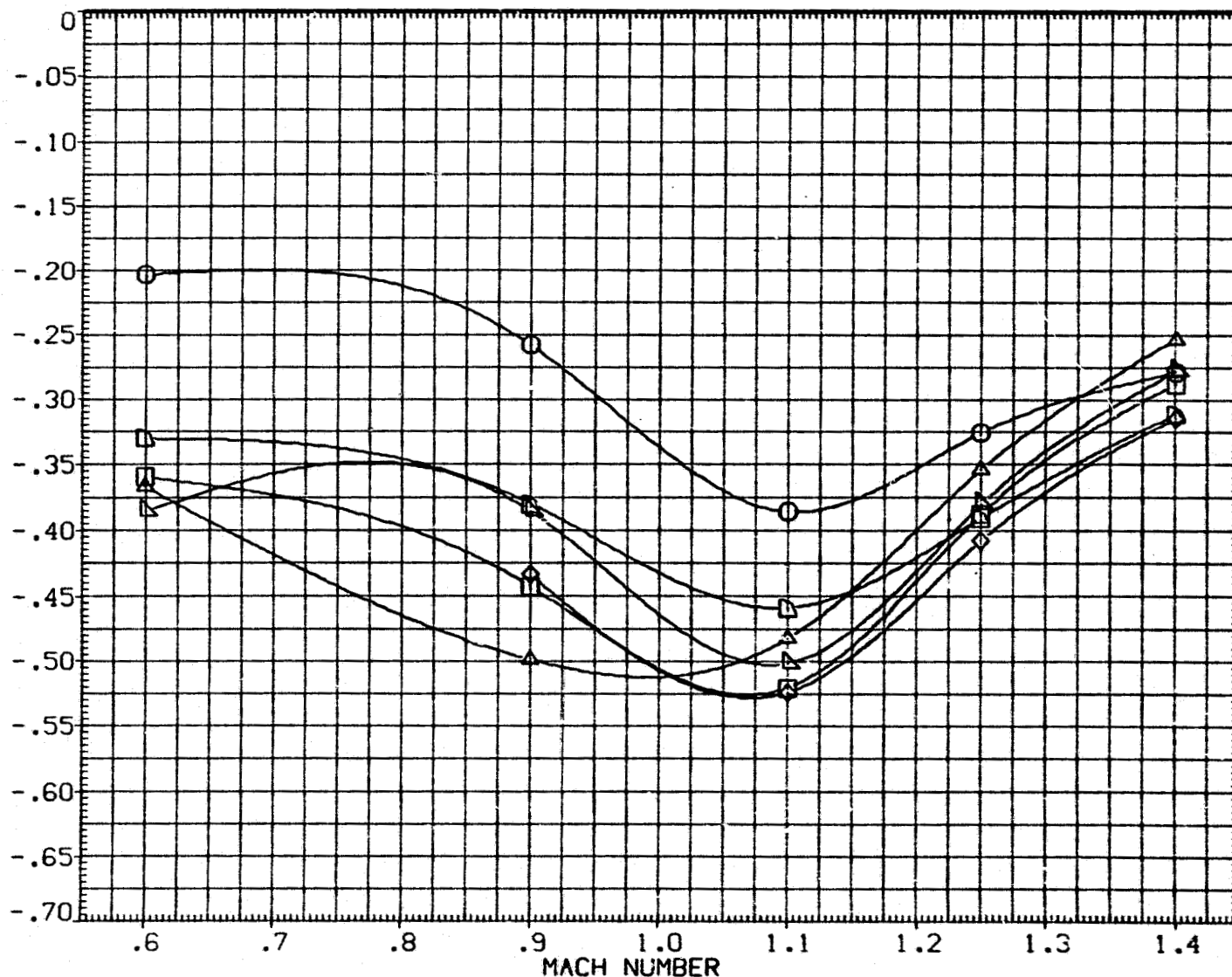


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2630.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 378) ORBITER BASE, CP378

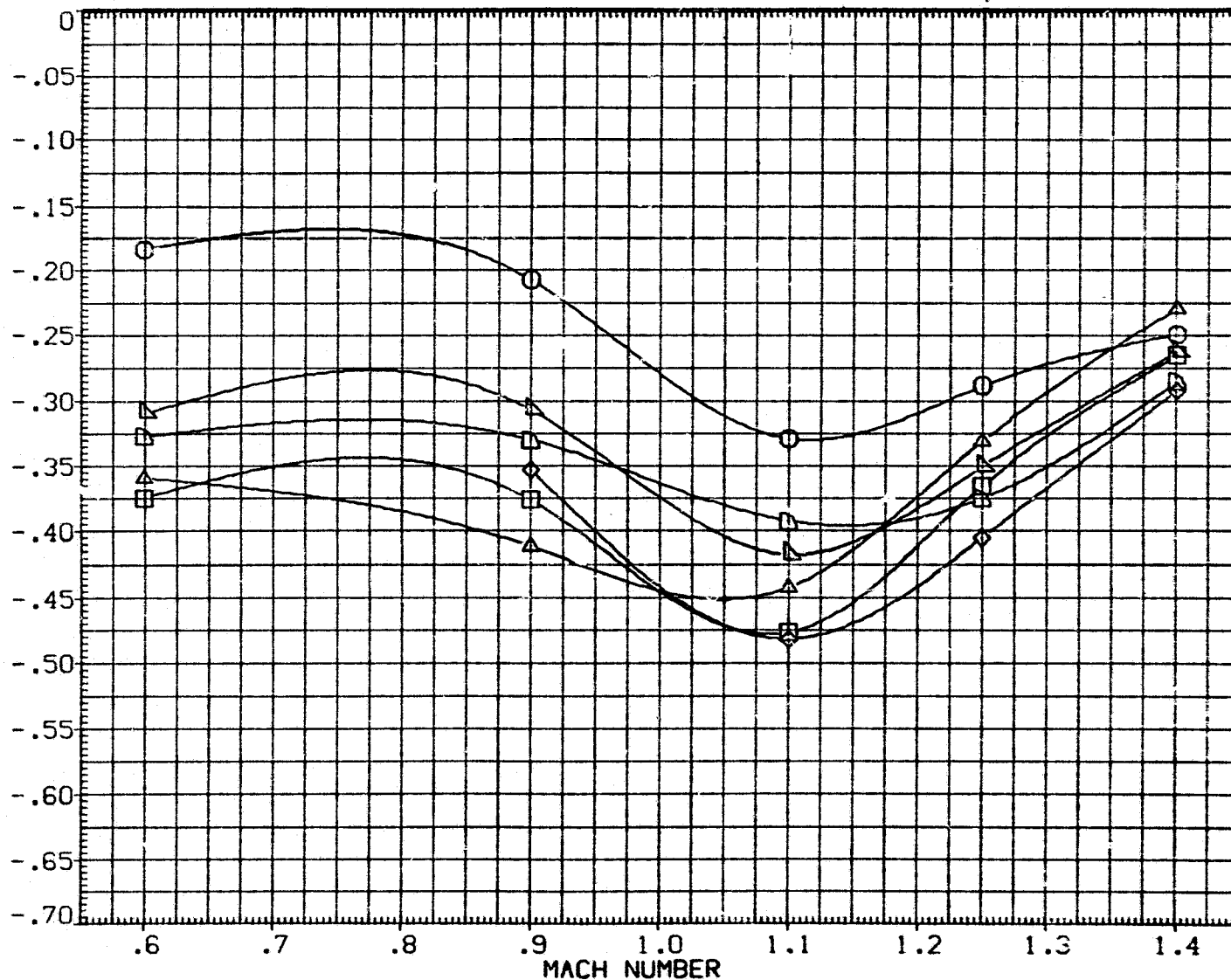


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMMP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMMP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMMP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 378) ORBITER BASE. CP378

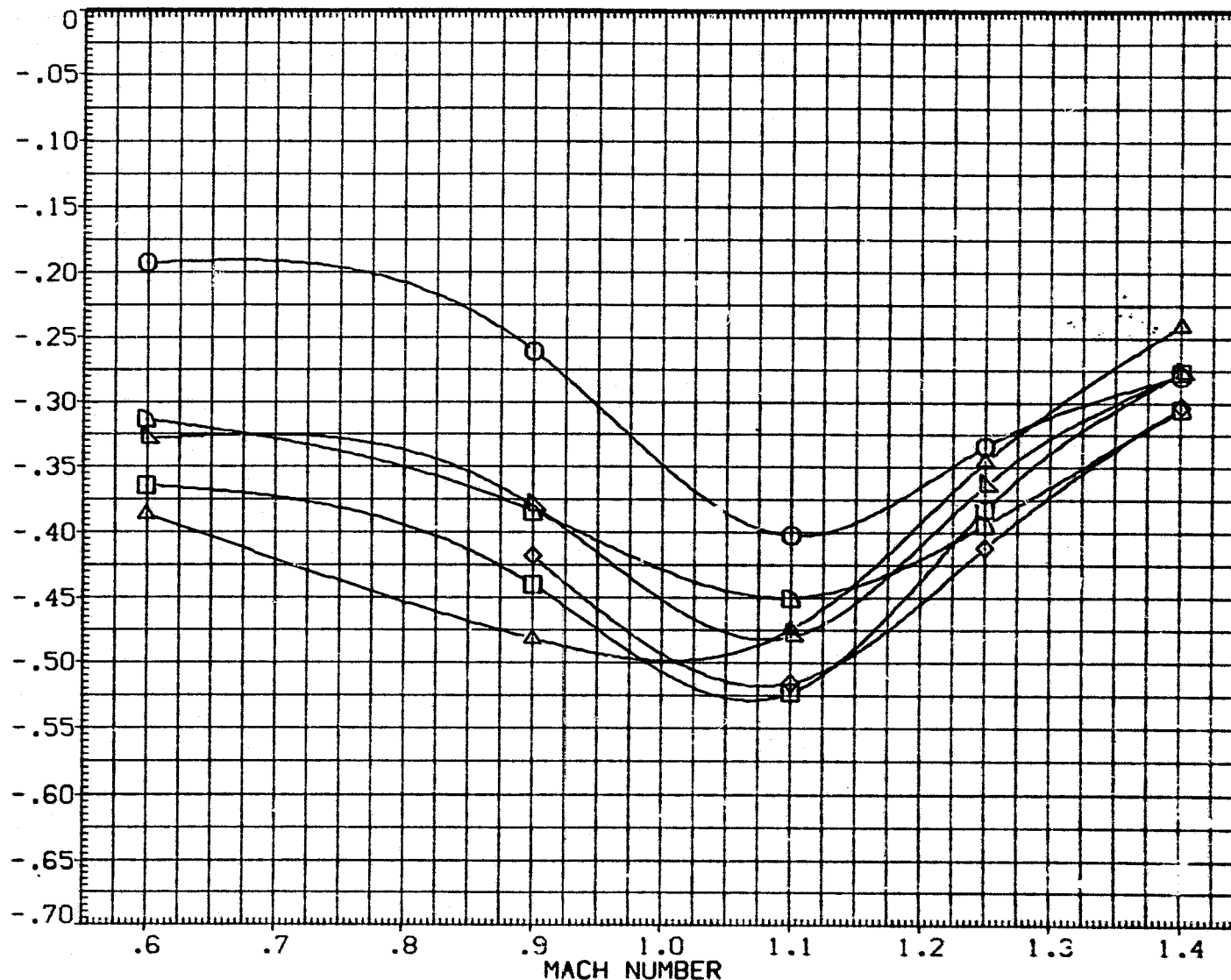


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 715) ORBITER BASE, CP715

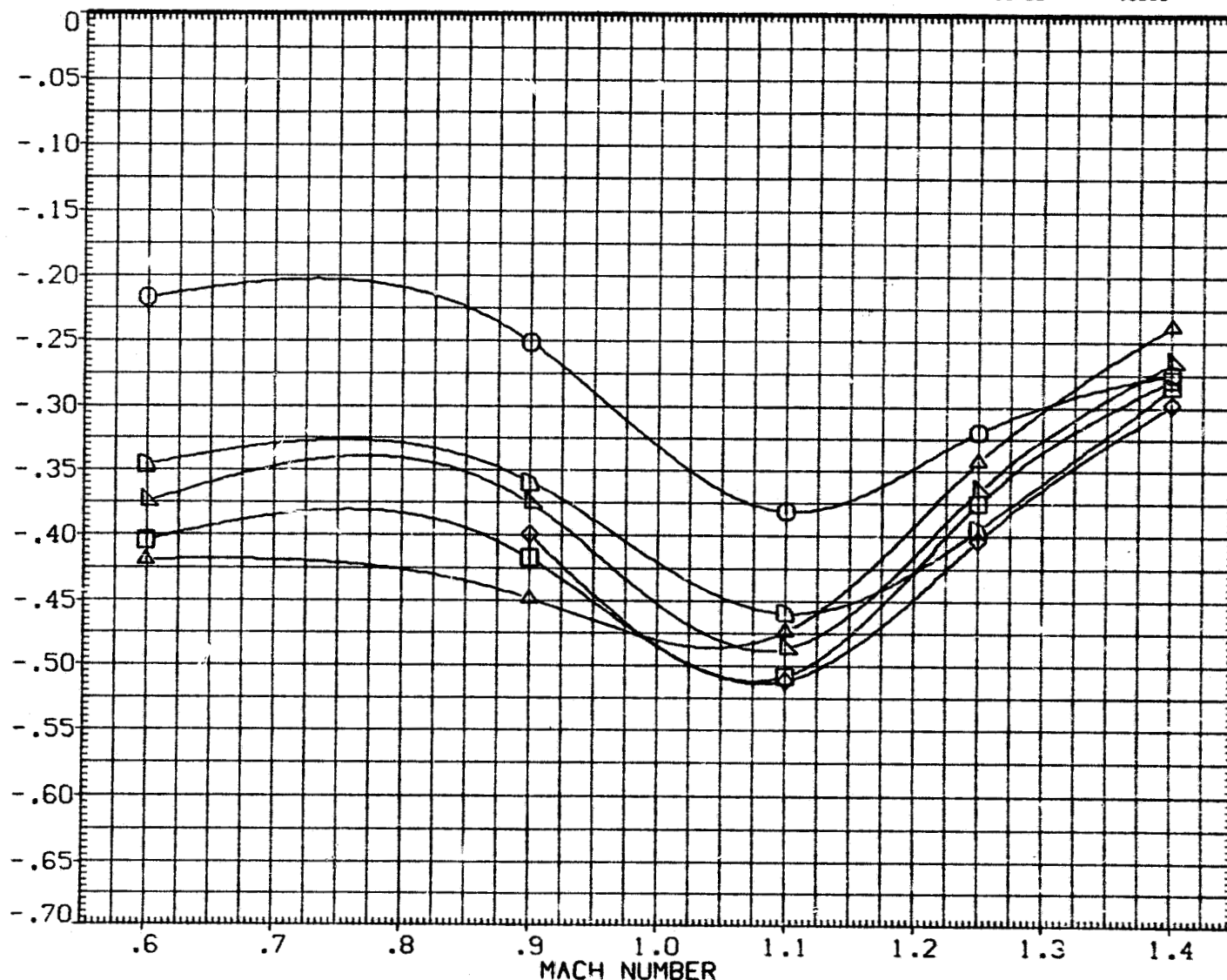


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OR	ALPHA	REFERENCE INFORMATION		
(FE4028) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085) □	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 715) ORBITER BASE. CP715

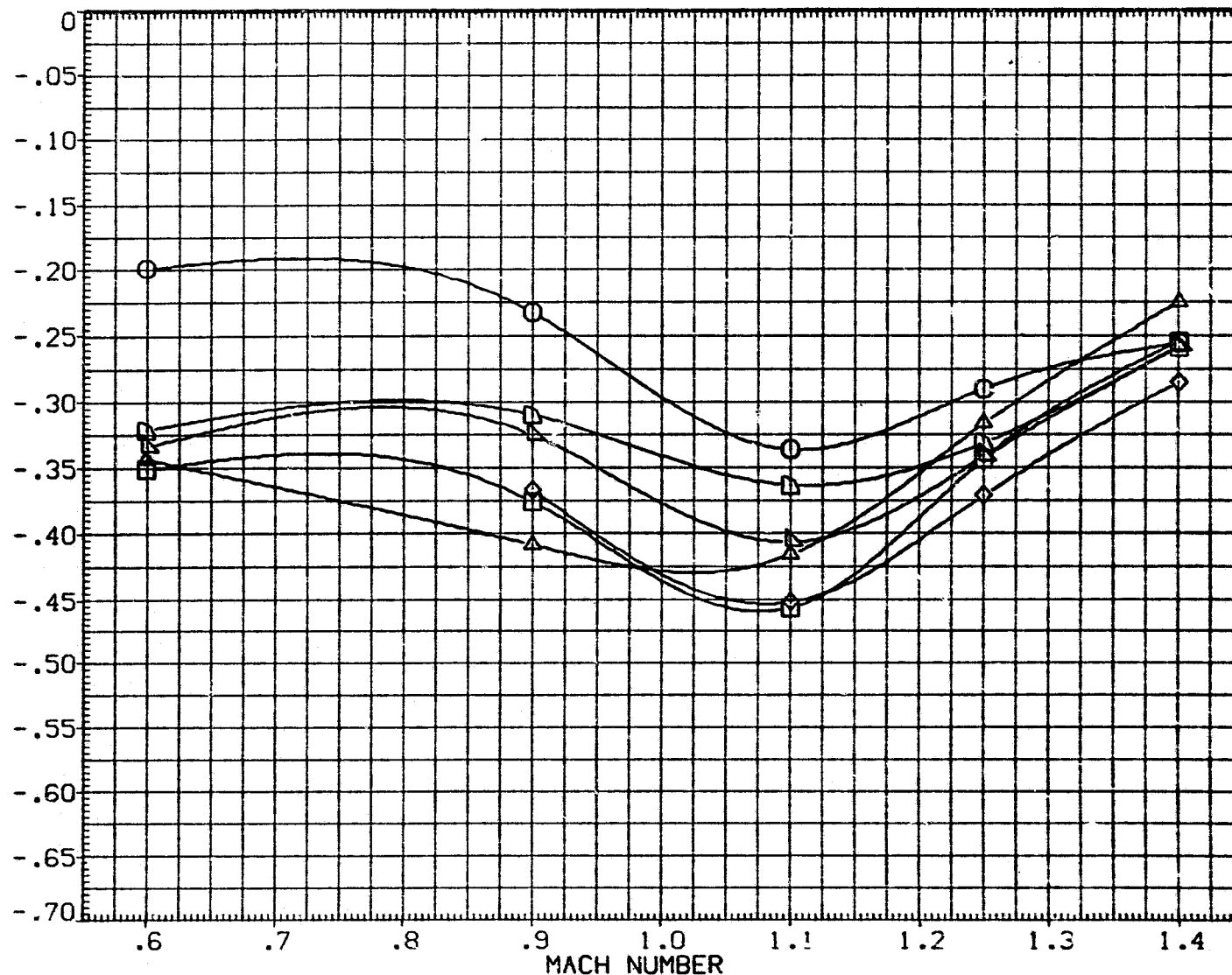


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SO.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

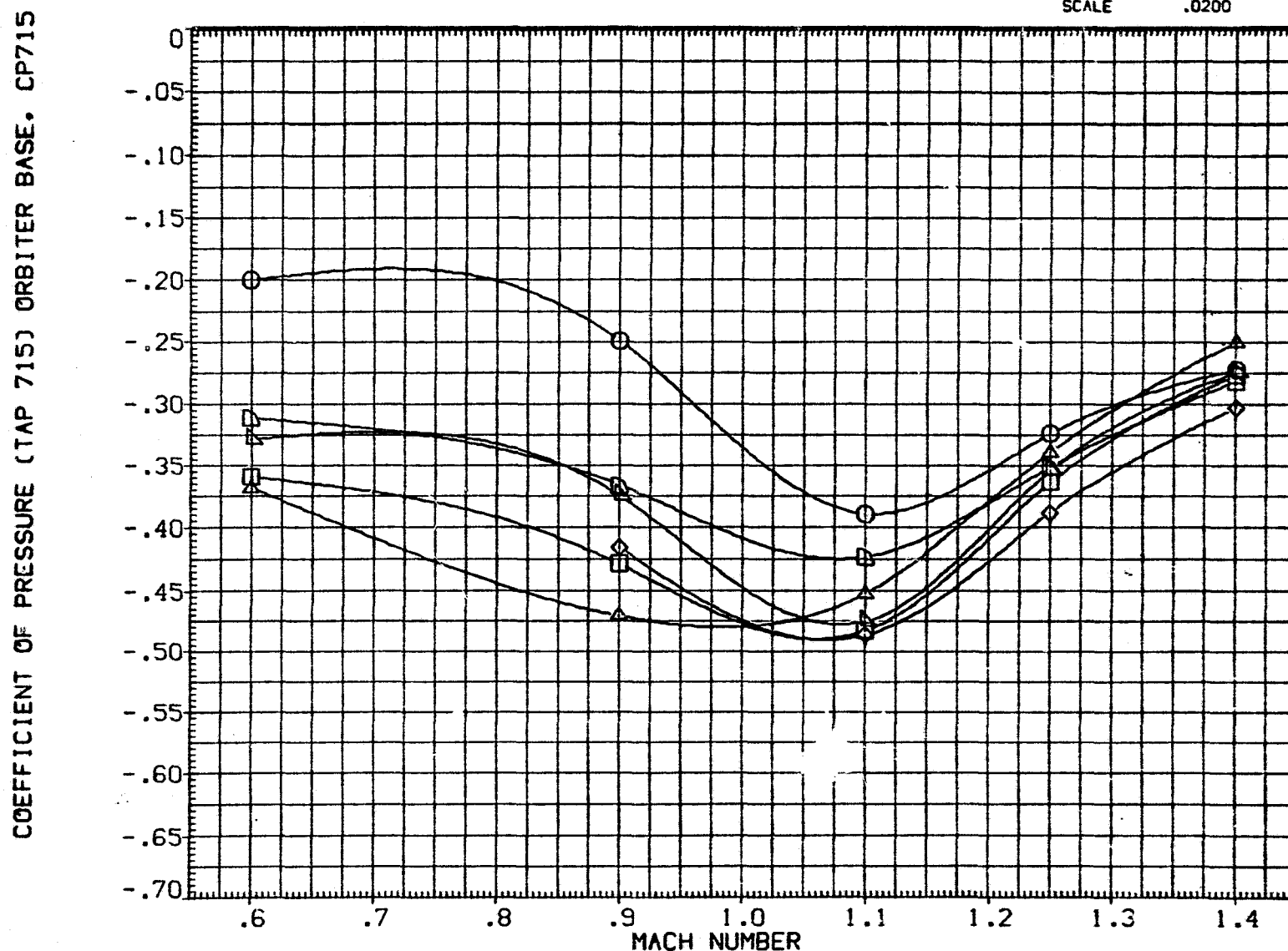
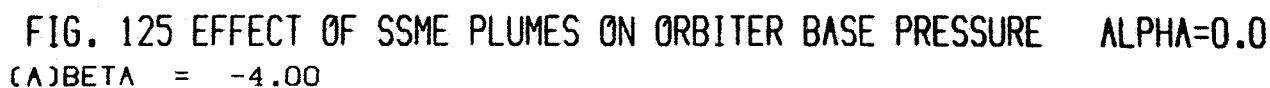


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

COEFFICIENT OF PRESSURE (TAP 375) ORBITER BASE, CP375



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028) □	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020) ○	ARC 11-023 1A90 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016) ×	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011) △	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080) ◇	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085) ▢	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

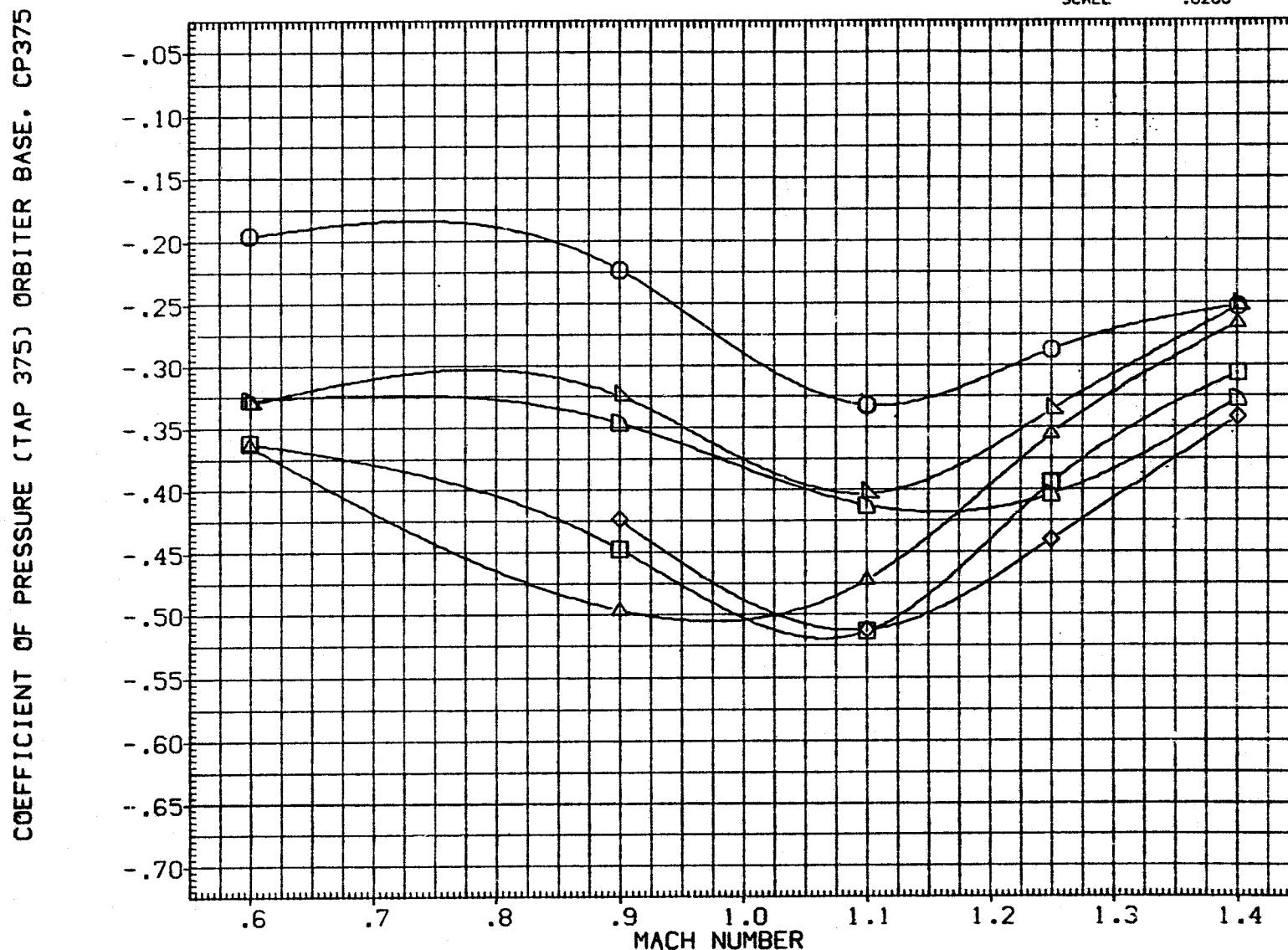


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMMP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMMP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMMP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 375) ORBITER BASE, CP375

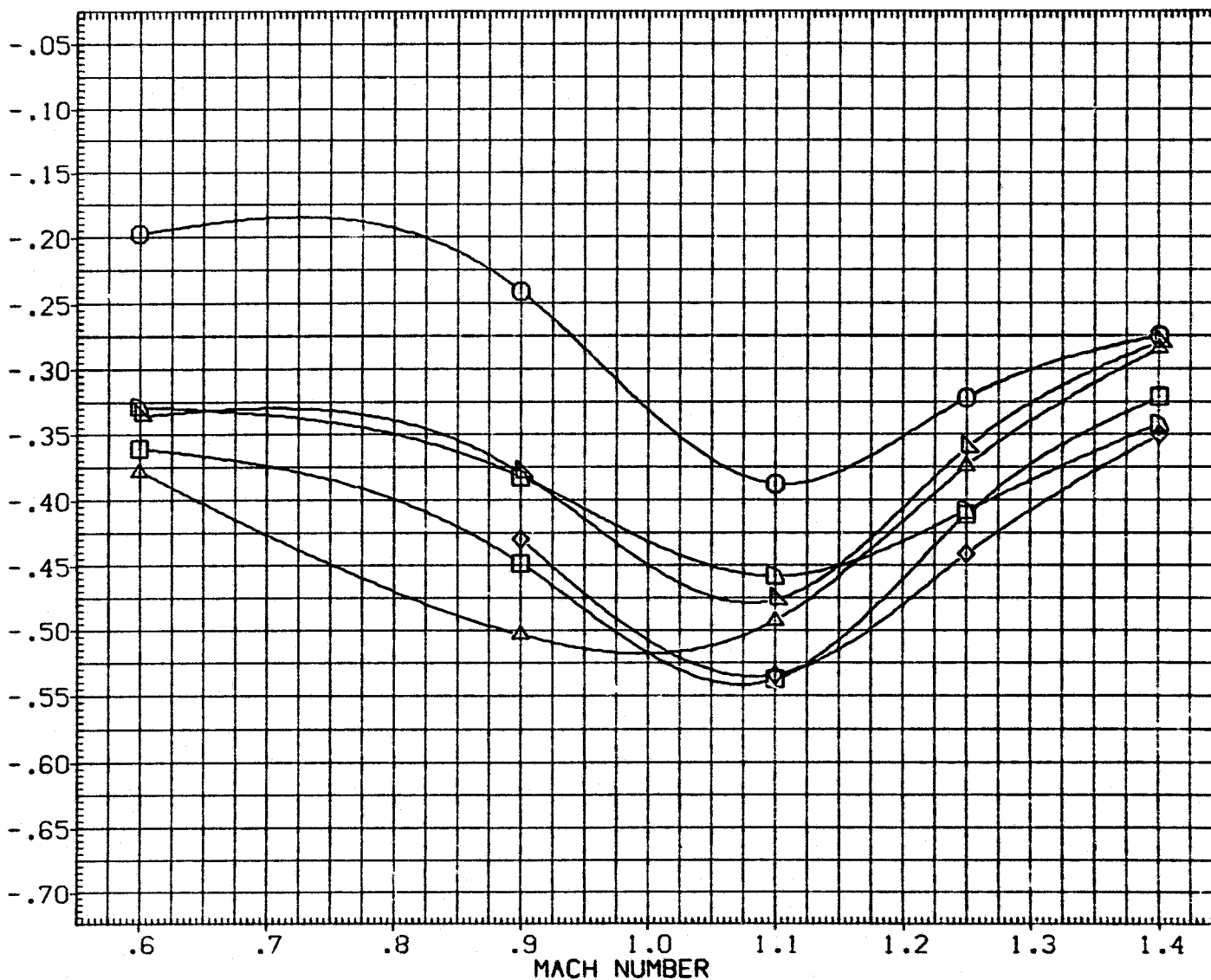


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 337) ORBITER BASE, CP377

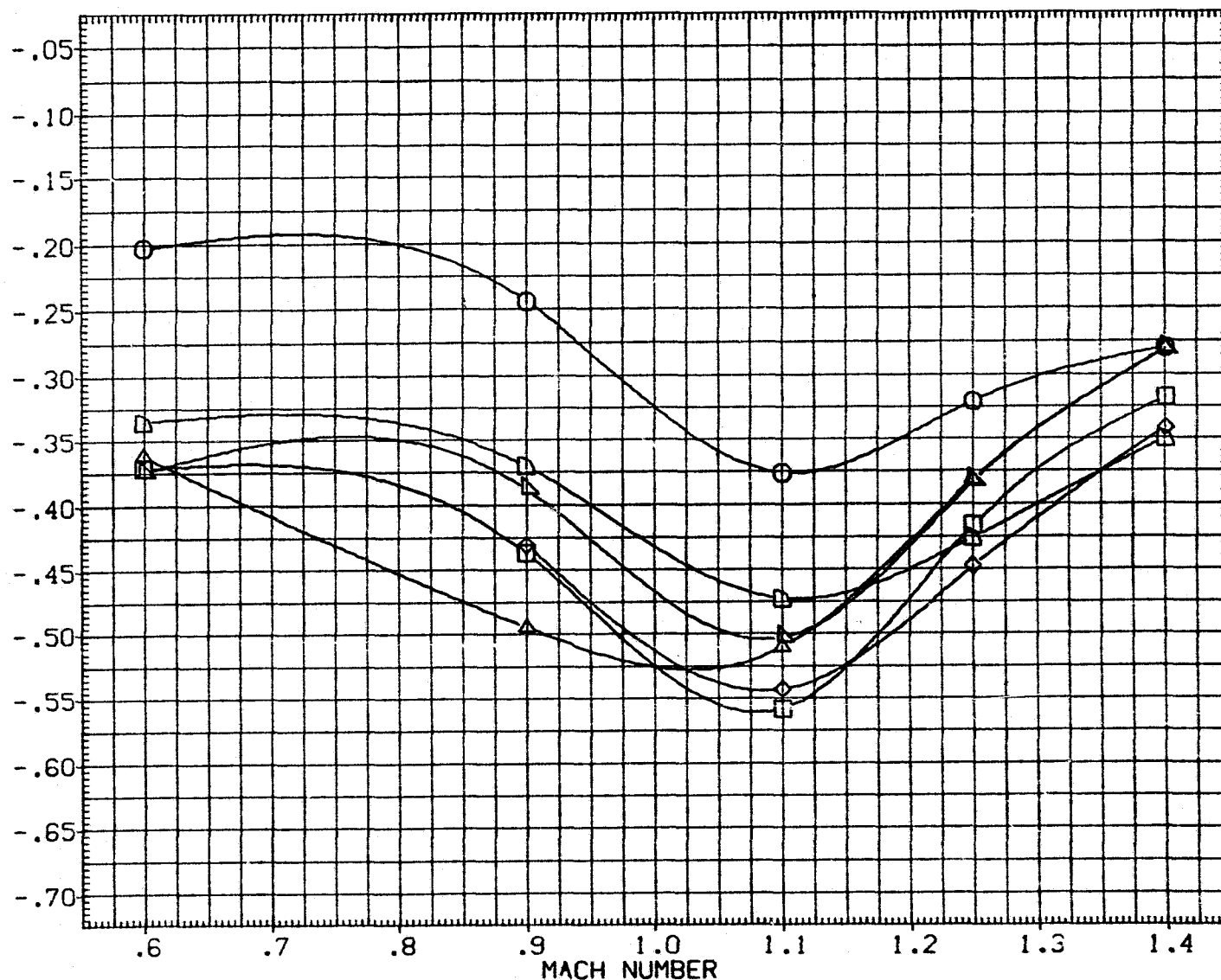


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 337) ORBITER BASE. CP377

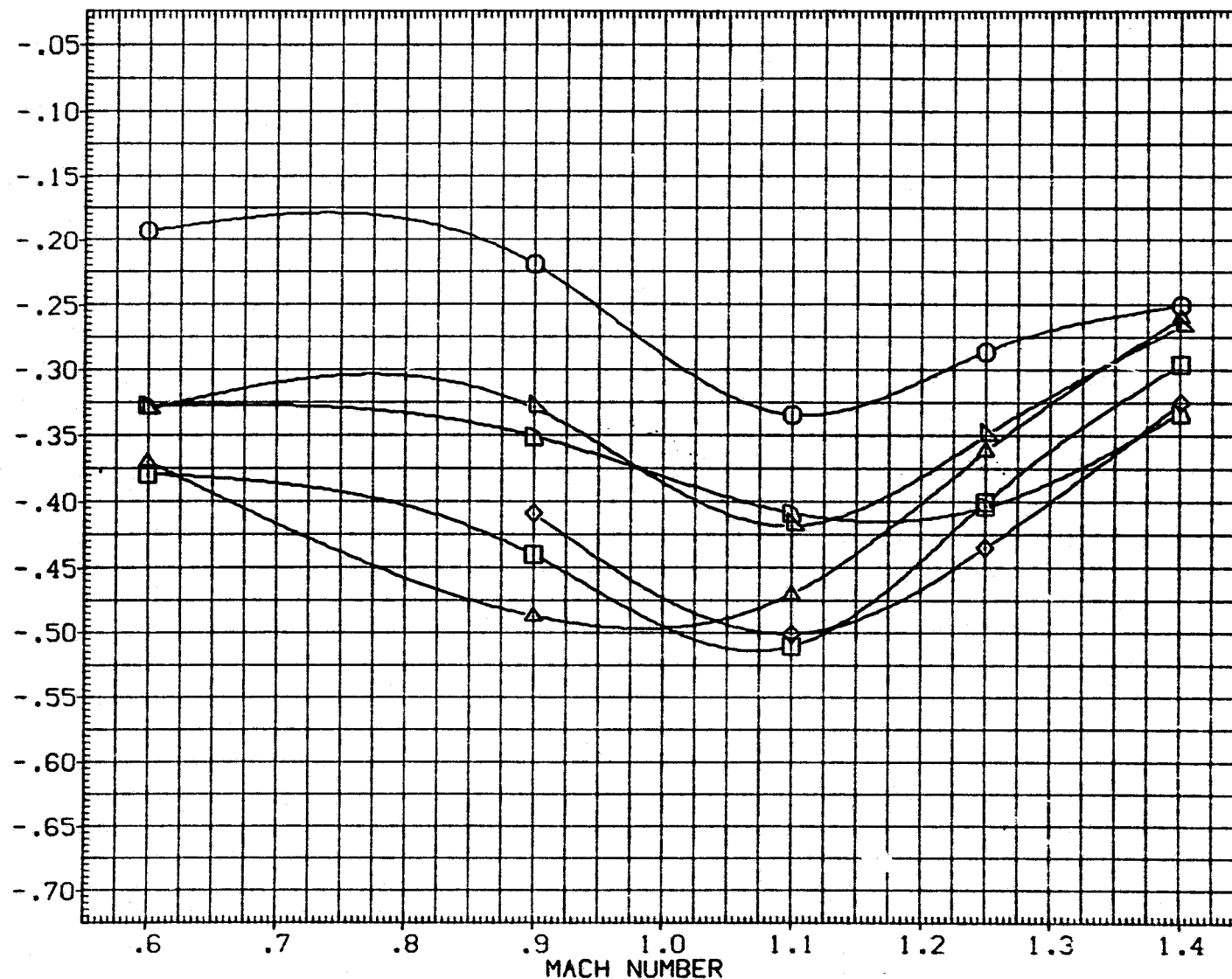


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 337) ORBITER BASE, CP377

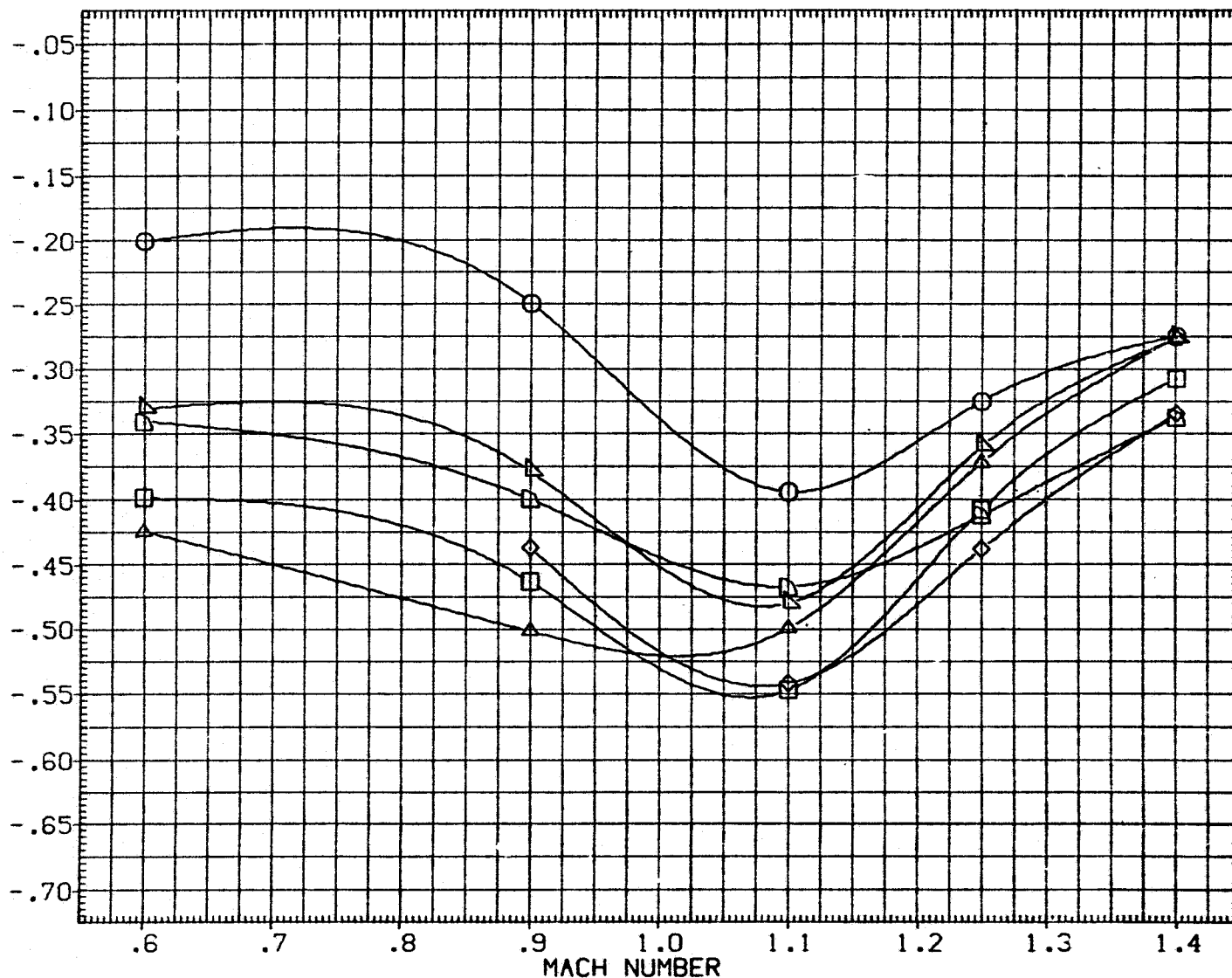


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF 2690.0000 SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF 1290.3000 IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF 1290.3000 IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP .0000 IN.
(FE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP .0000 IN.
(FE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 721) ORBITER BASE. CP721

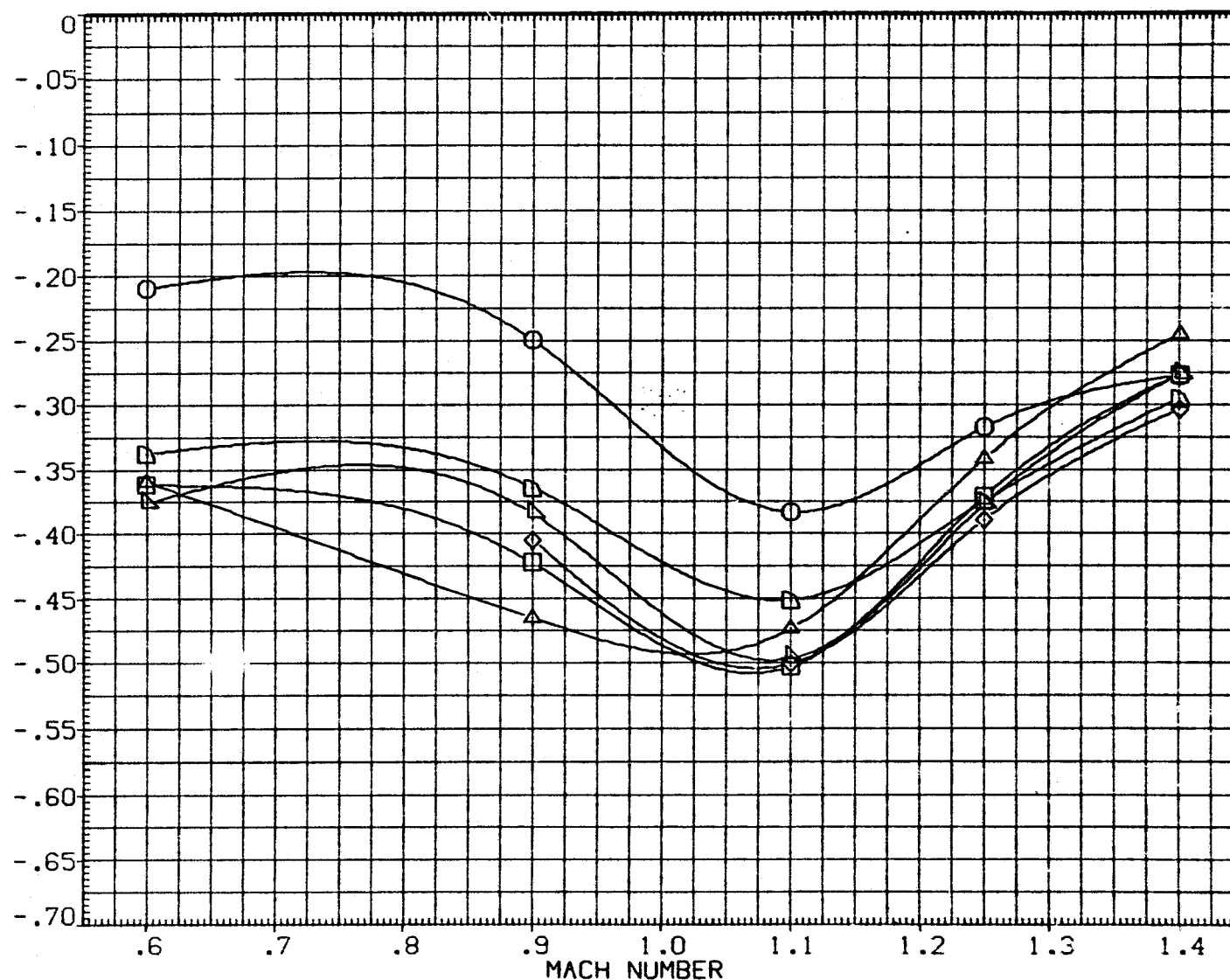


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 721) ORBITER BASE, CP721

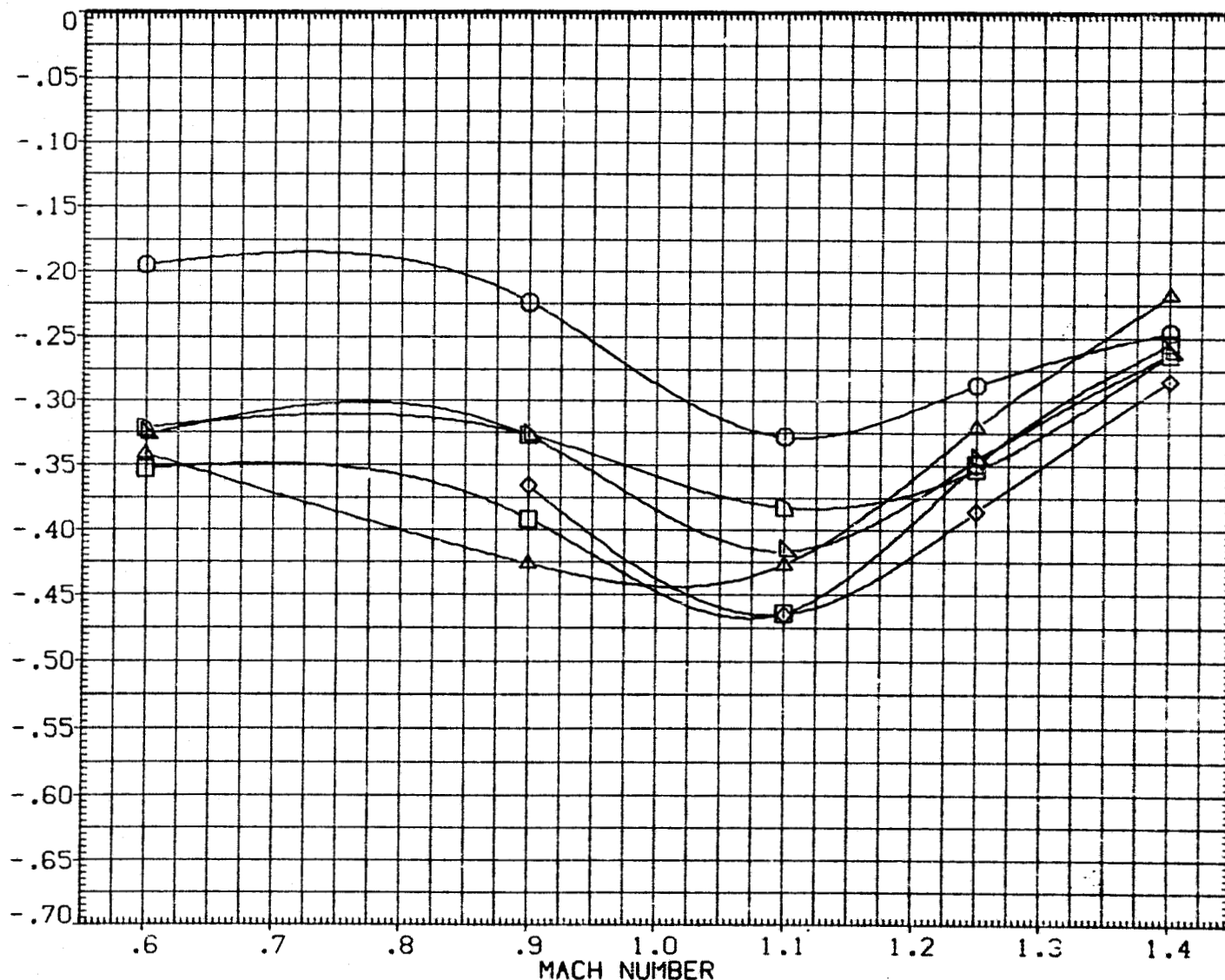


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 721) ORBITER BASE. CP721

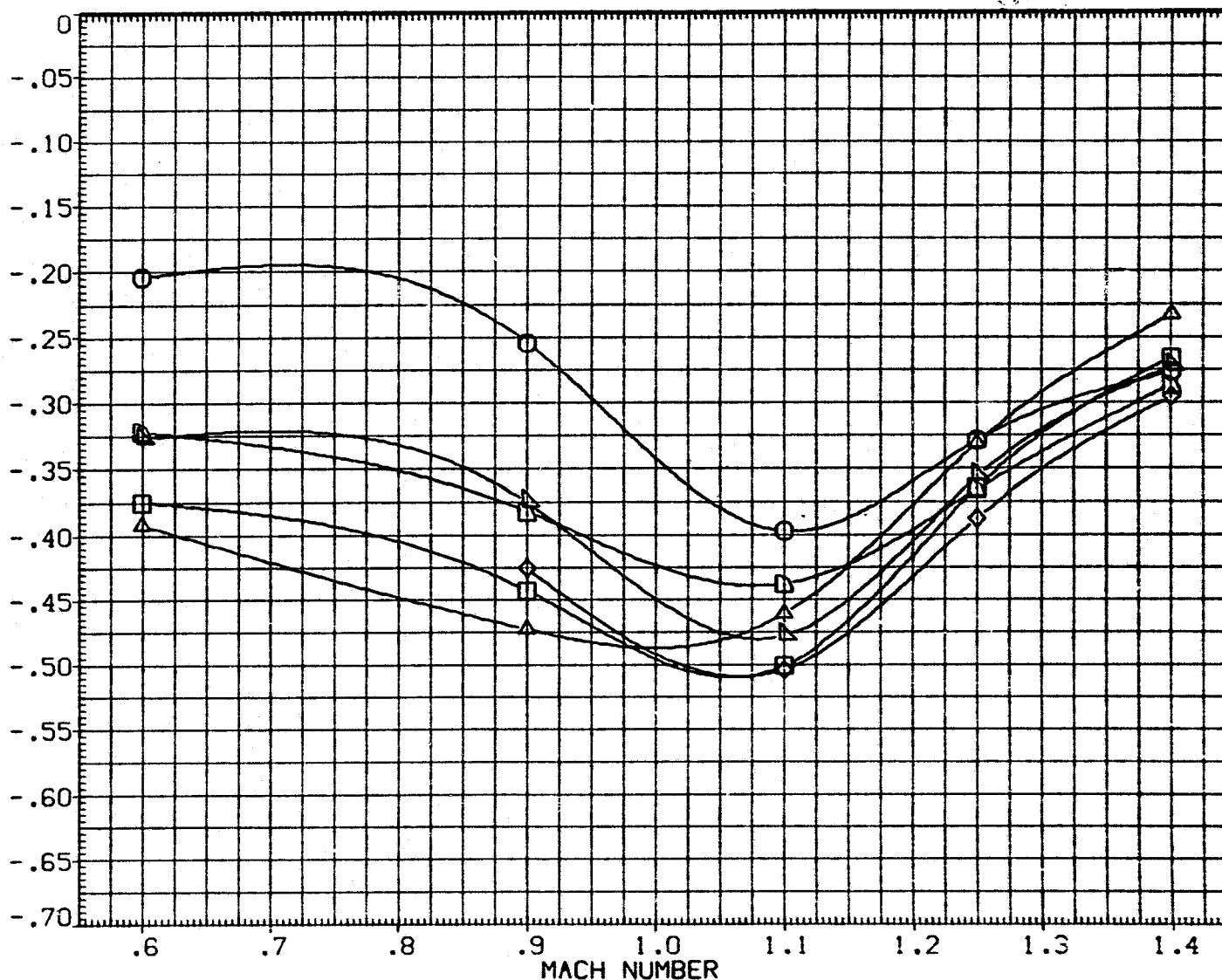


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 372) ORBITER BASE, CP372

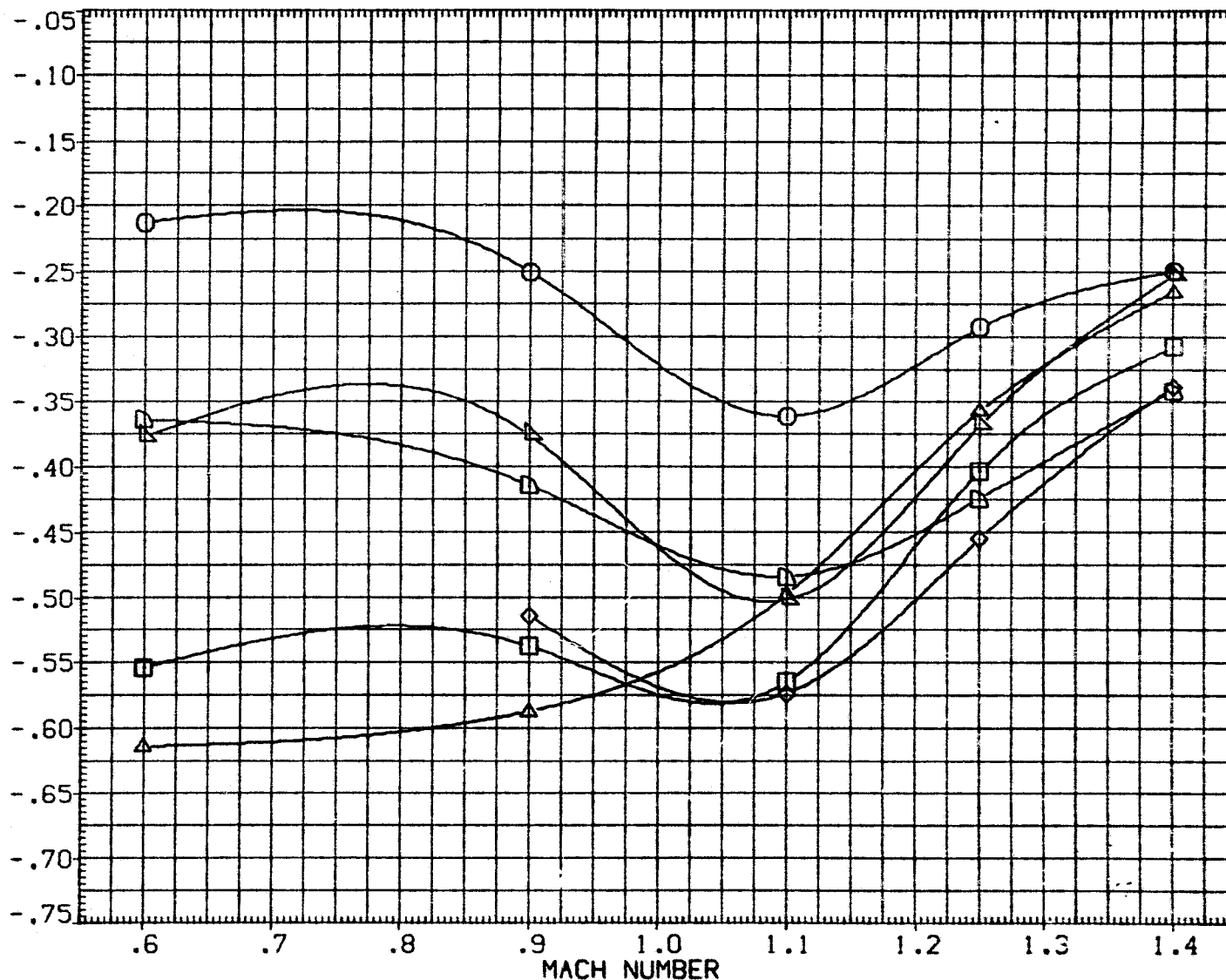


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION
(FE4028)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF 2690.0000 SQ.FT.
(FE4020)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF 1290.3000 IN.
(FE4016)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF 1290.3000 IN.
(FE4011)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP .0000 IN.
(FE4080)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP .0000 IN.
(FE4085)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 372) ORBITER BASE. CP372

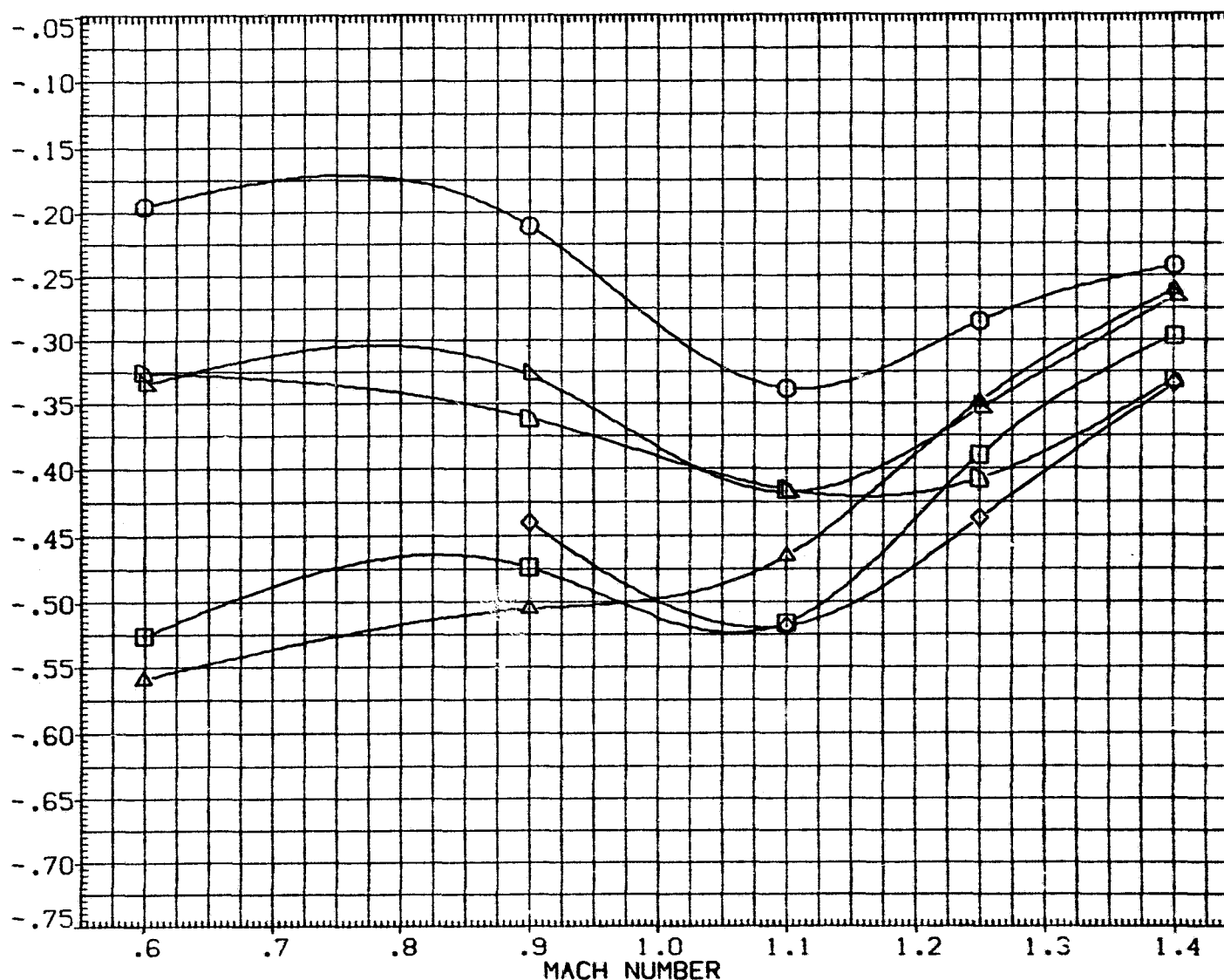


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 372) ORBITER BASE, CP372

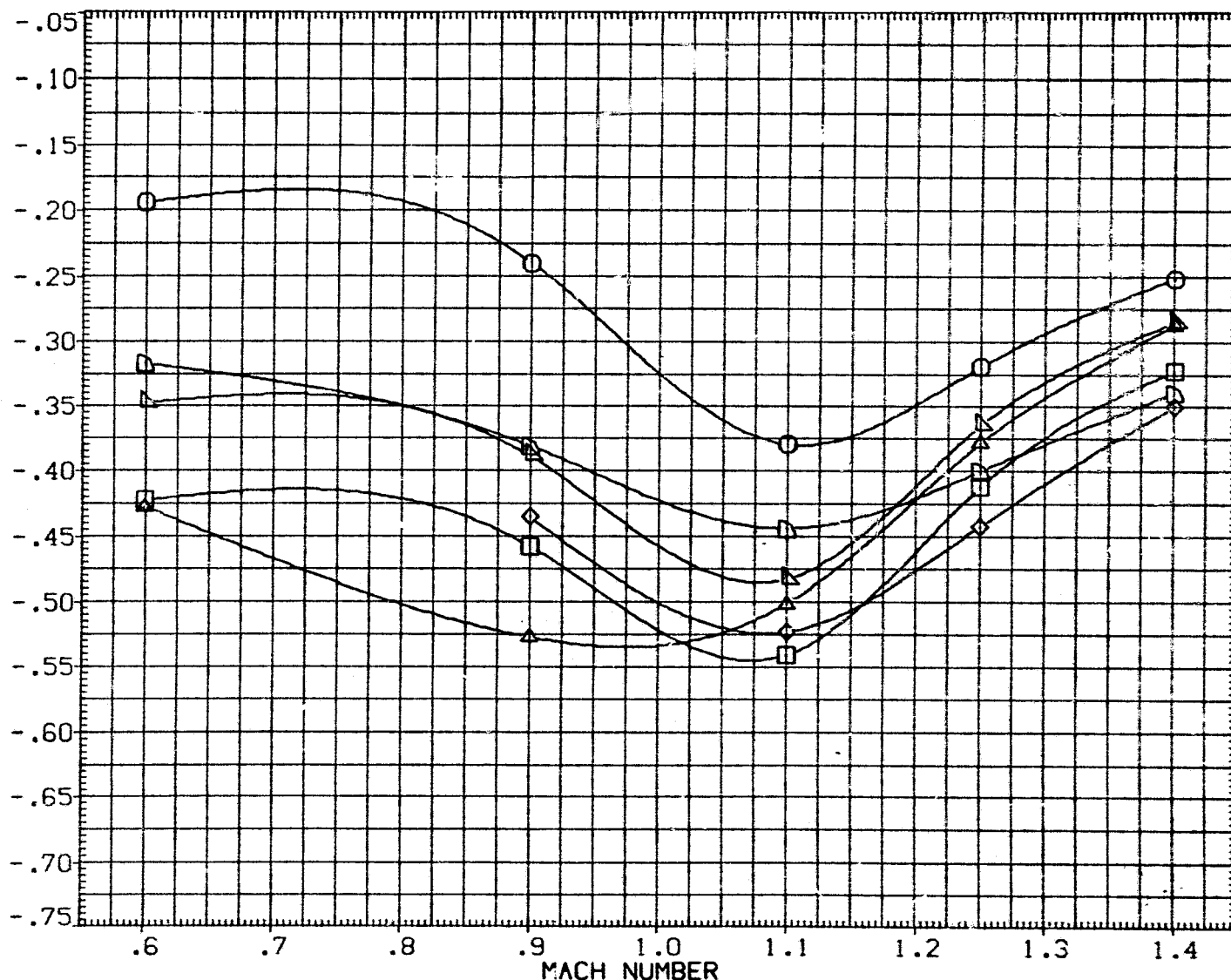


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C) BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 714) ORBITER BASE, CP714

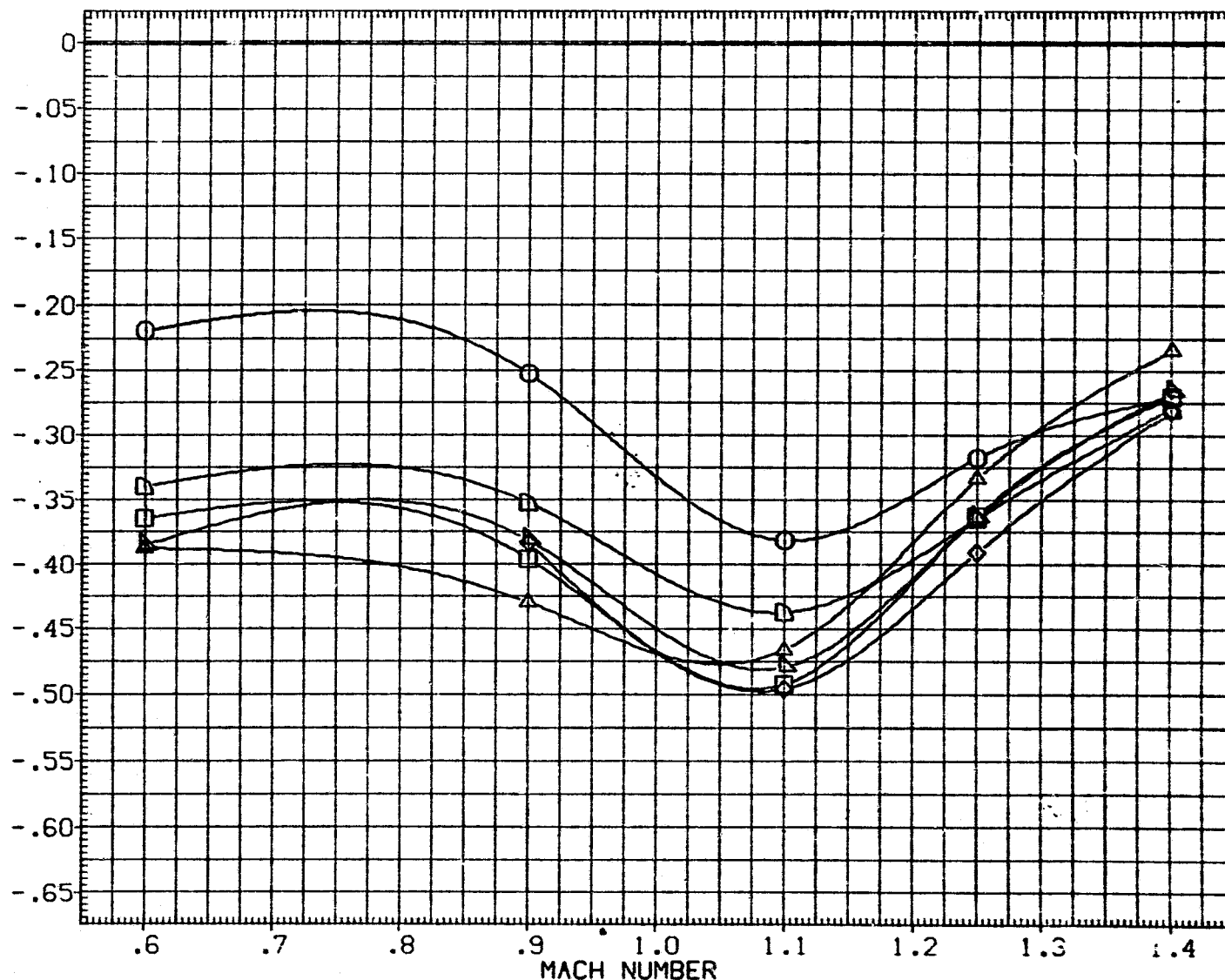


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(FE4018)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 714) ORBITER BASE, CP714

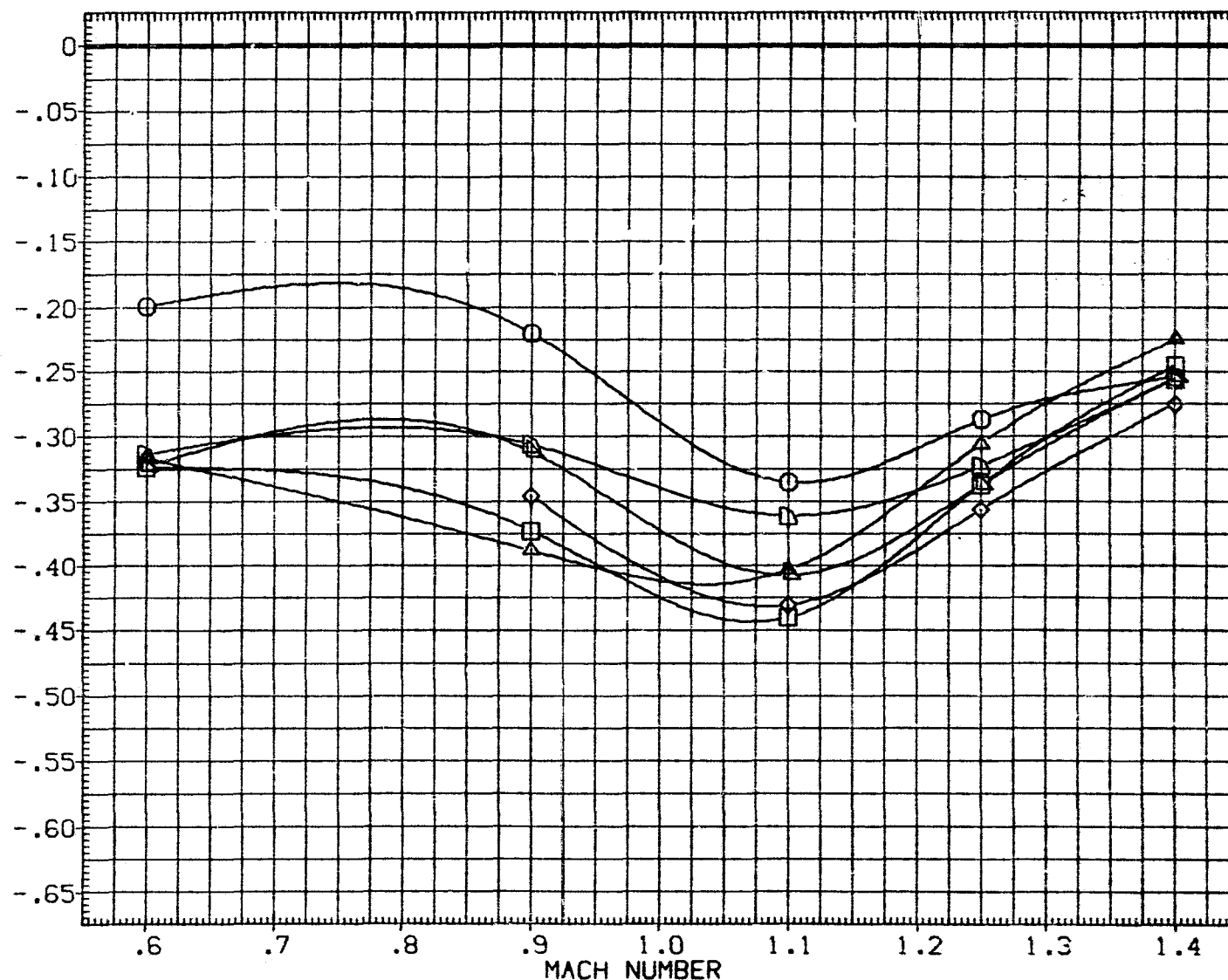


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF 2690.0000 SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF 1290.3000 IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF 1290.3000 IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP .0000 IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP .0000 IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 714) ORBITER BASE, CP714

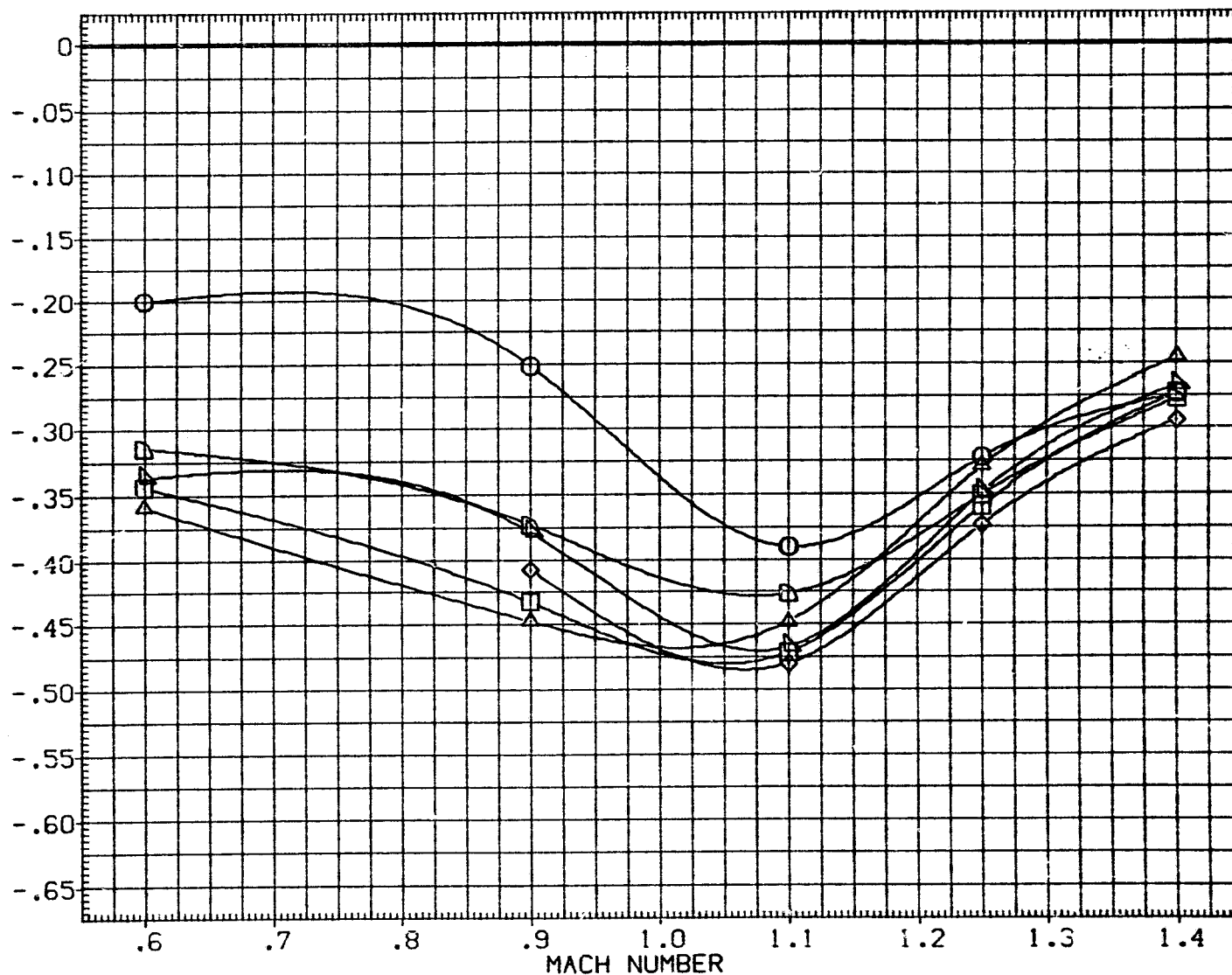


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 722) ORBITER BASE, CP722

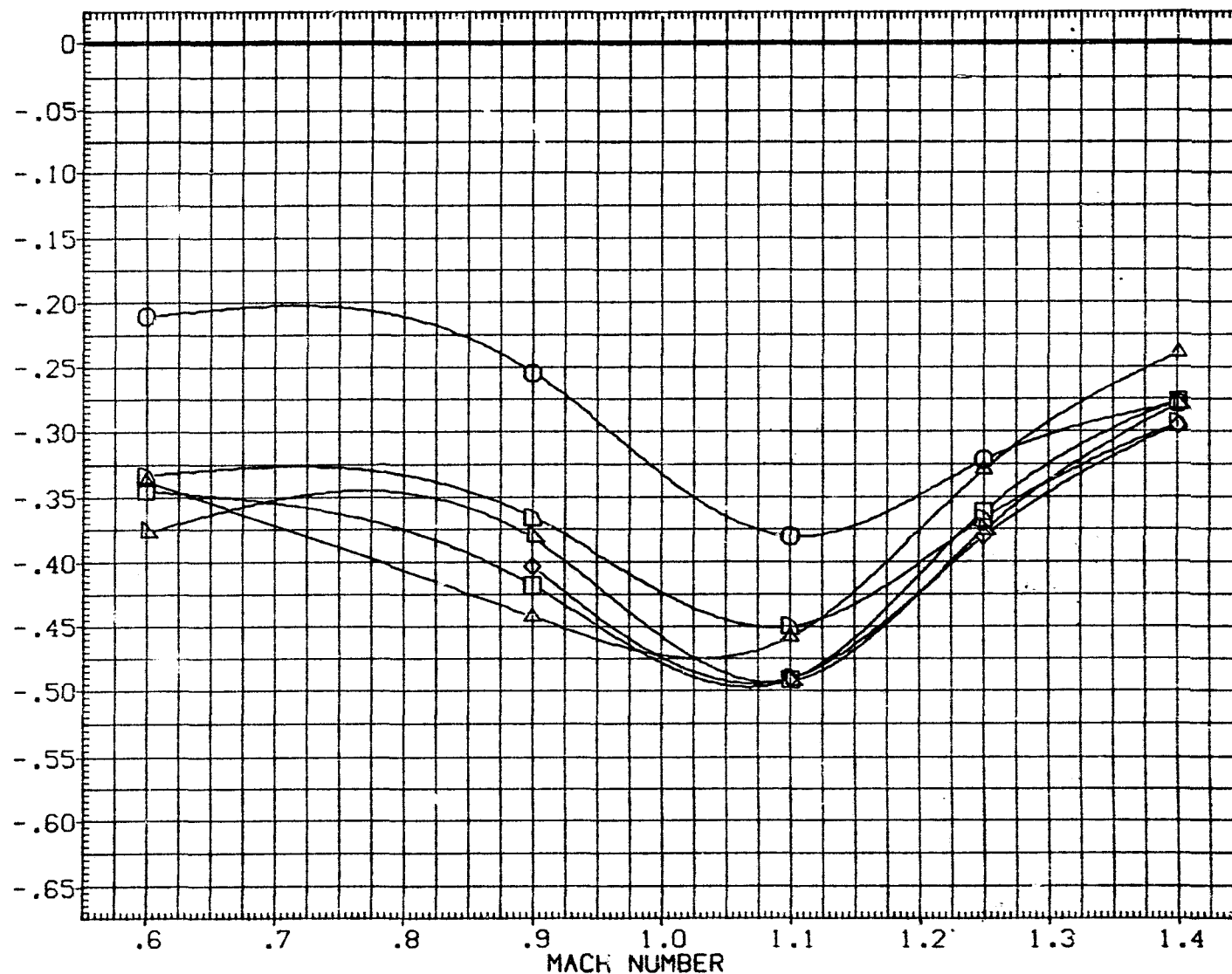


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SO.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 722) ORBITER BASE. CP722

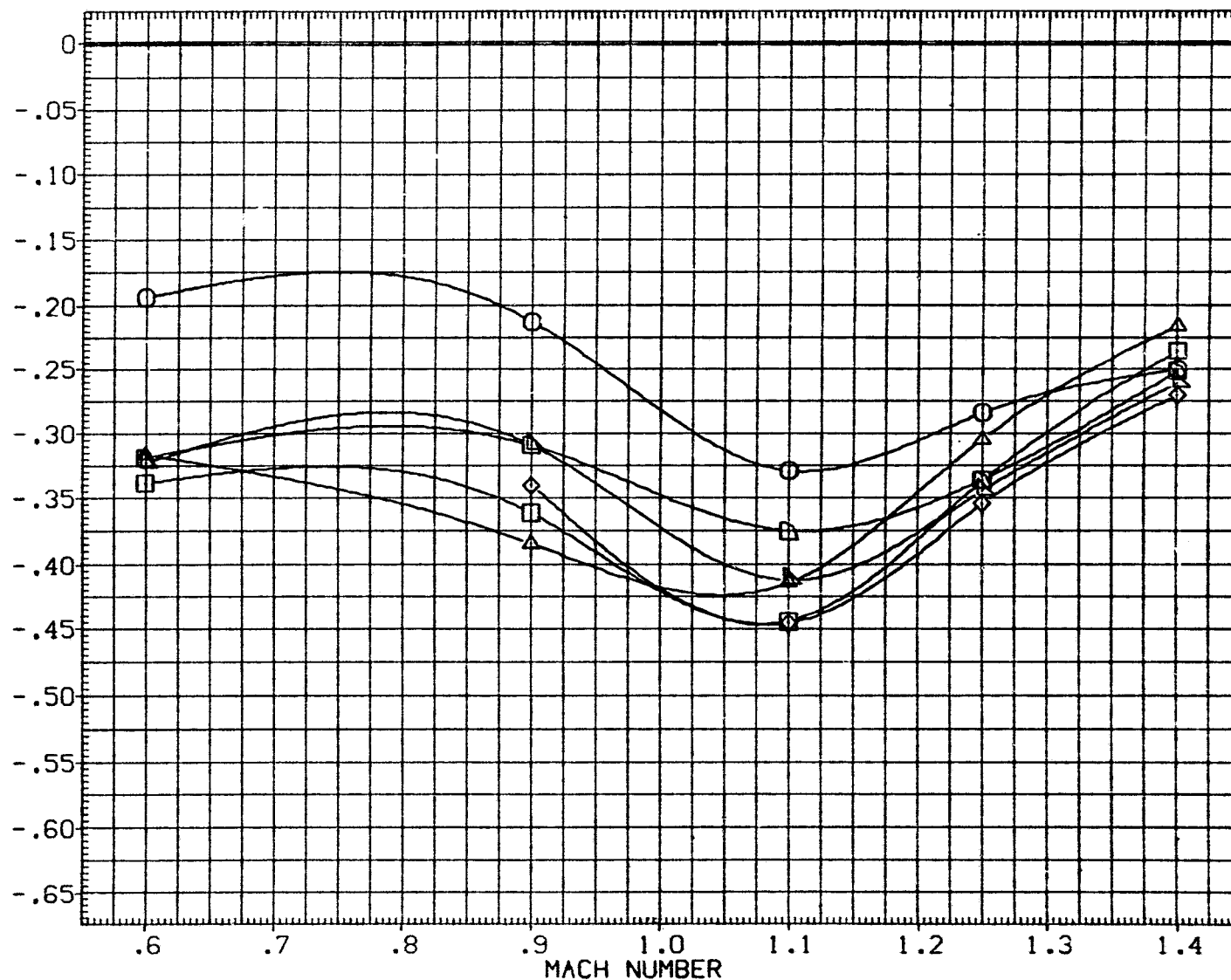


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 722) ORBITER BASE, CP722

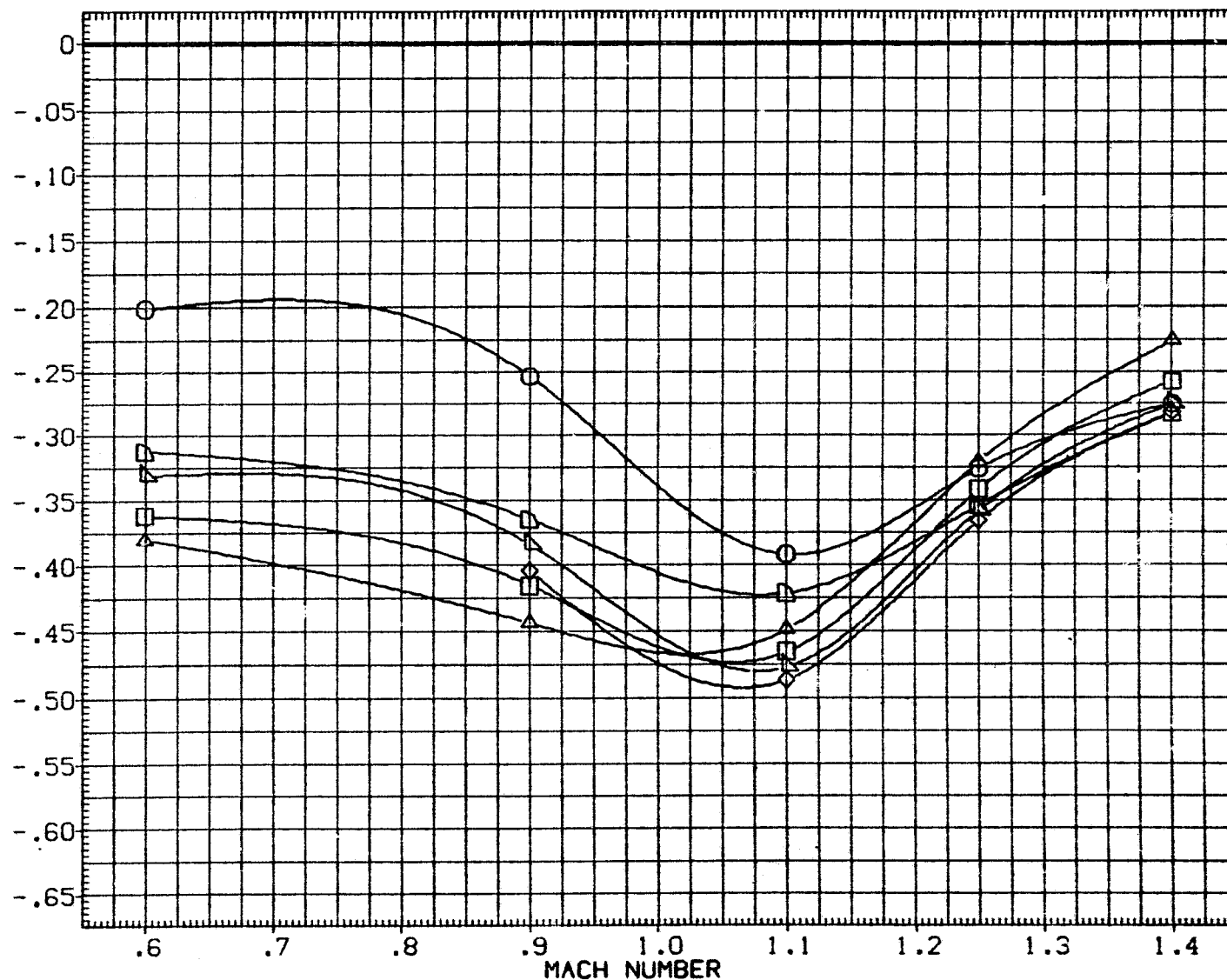


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	L'REF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	B'REF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 373) ORBITER BASE, CP373

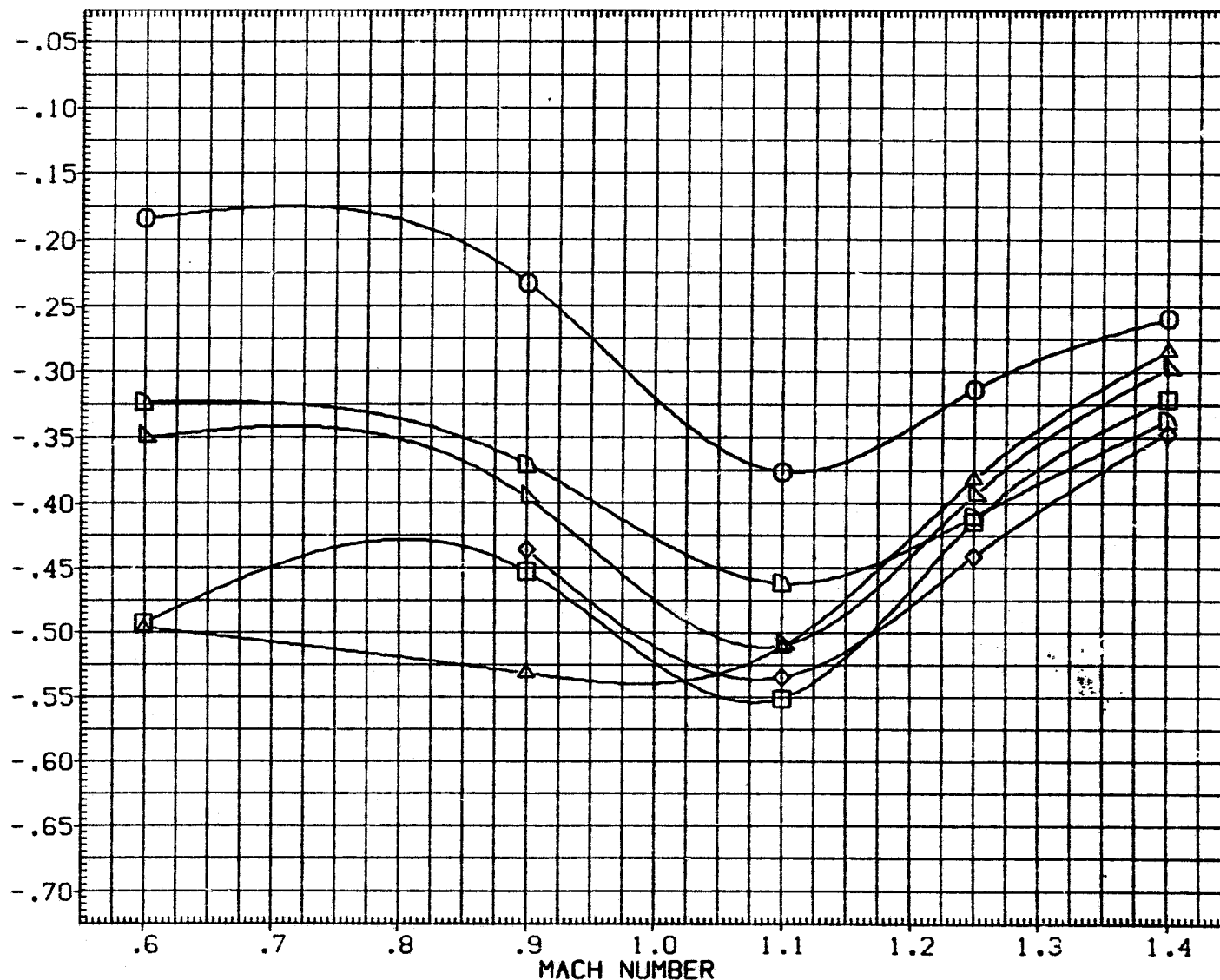


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XM RP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YM RP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZM RP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 373) ORBITER BASE, CP373

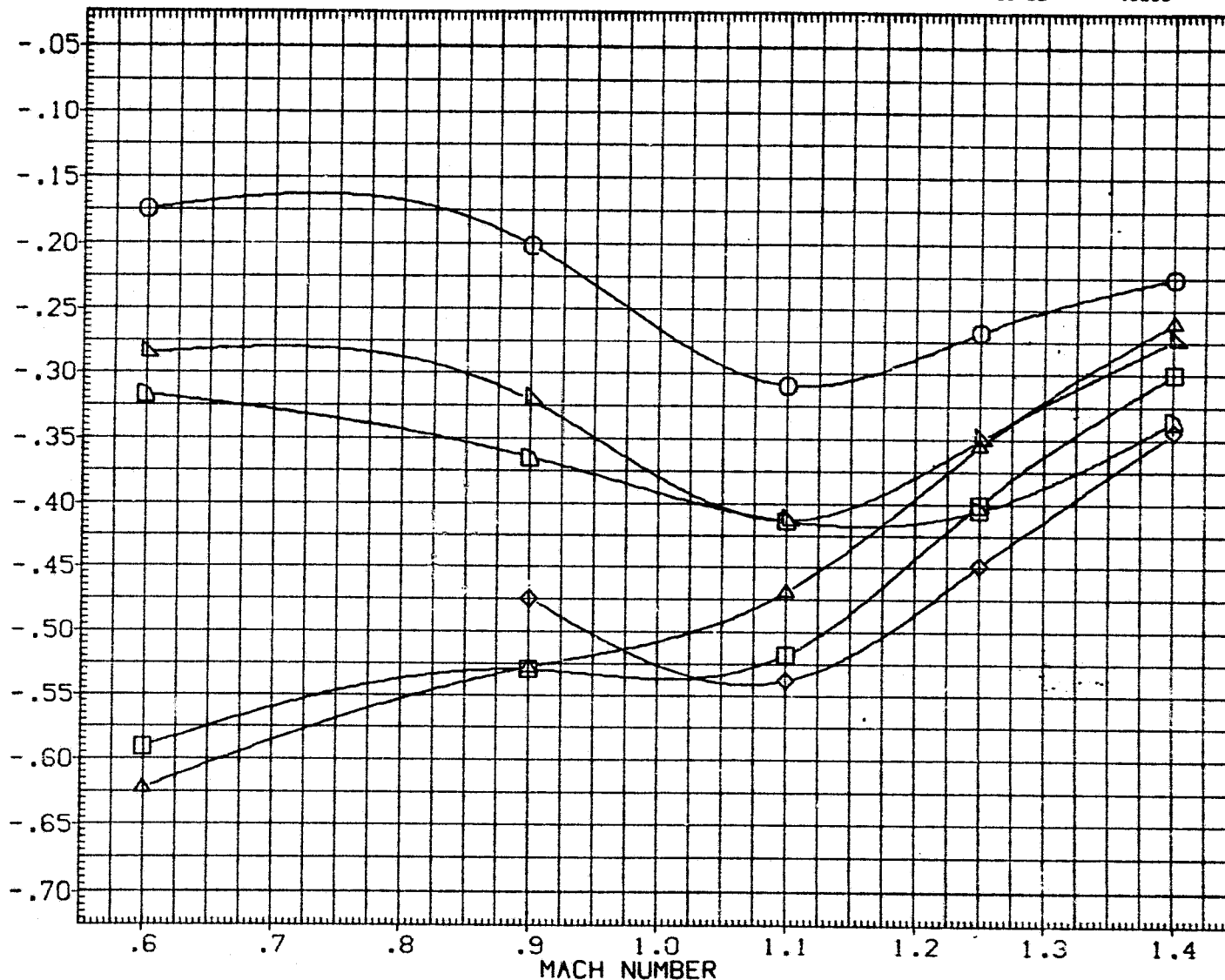


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 373) ORBITER BASE. CP373

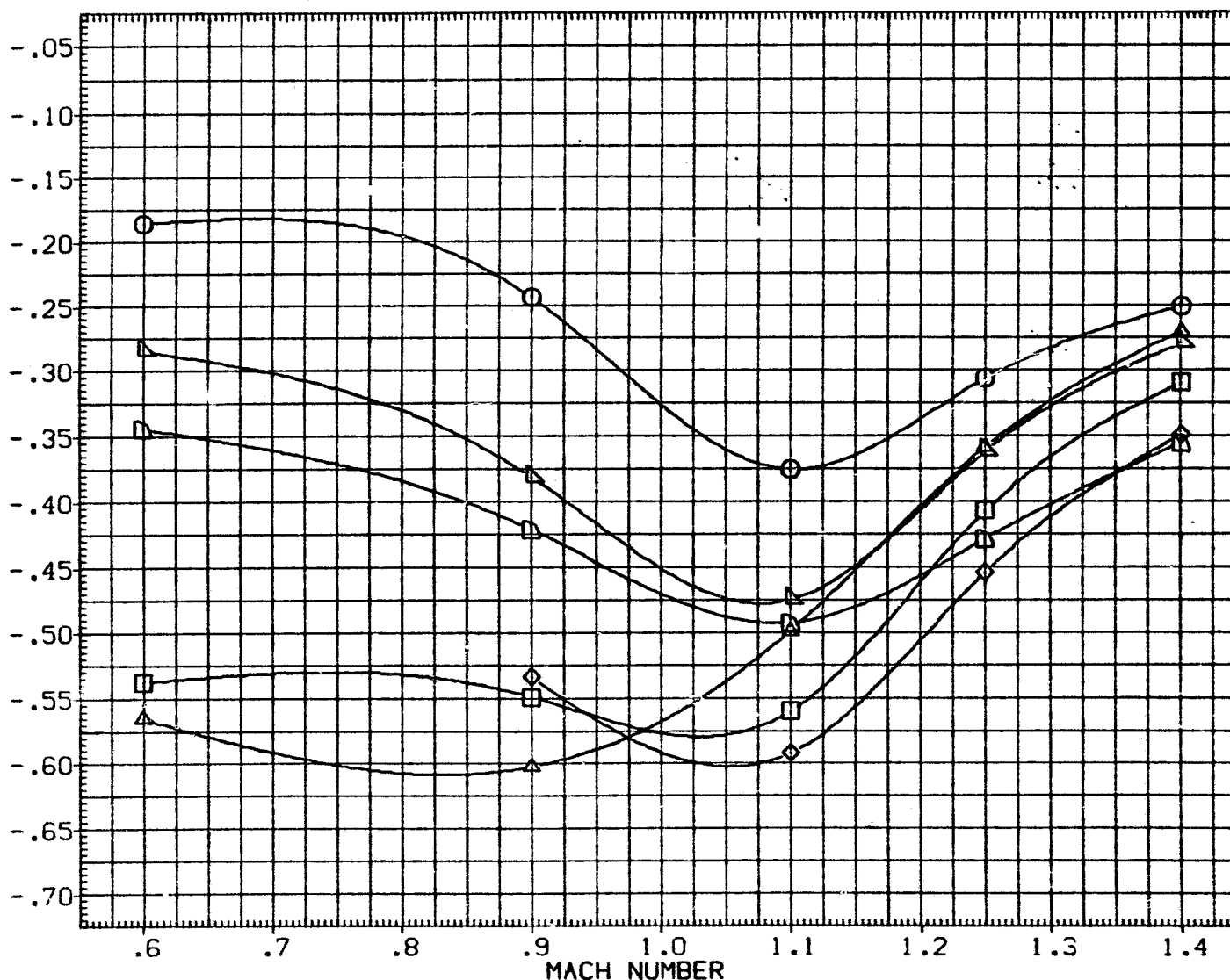


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 713) ORBITER BASE, CP713

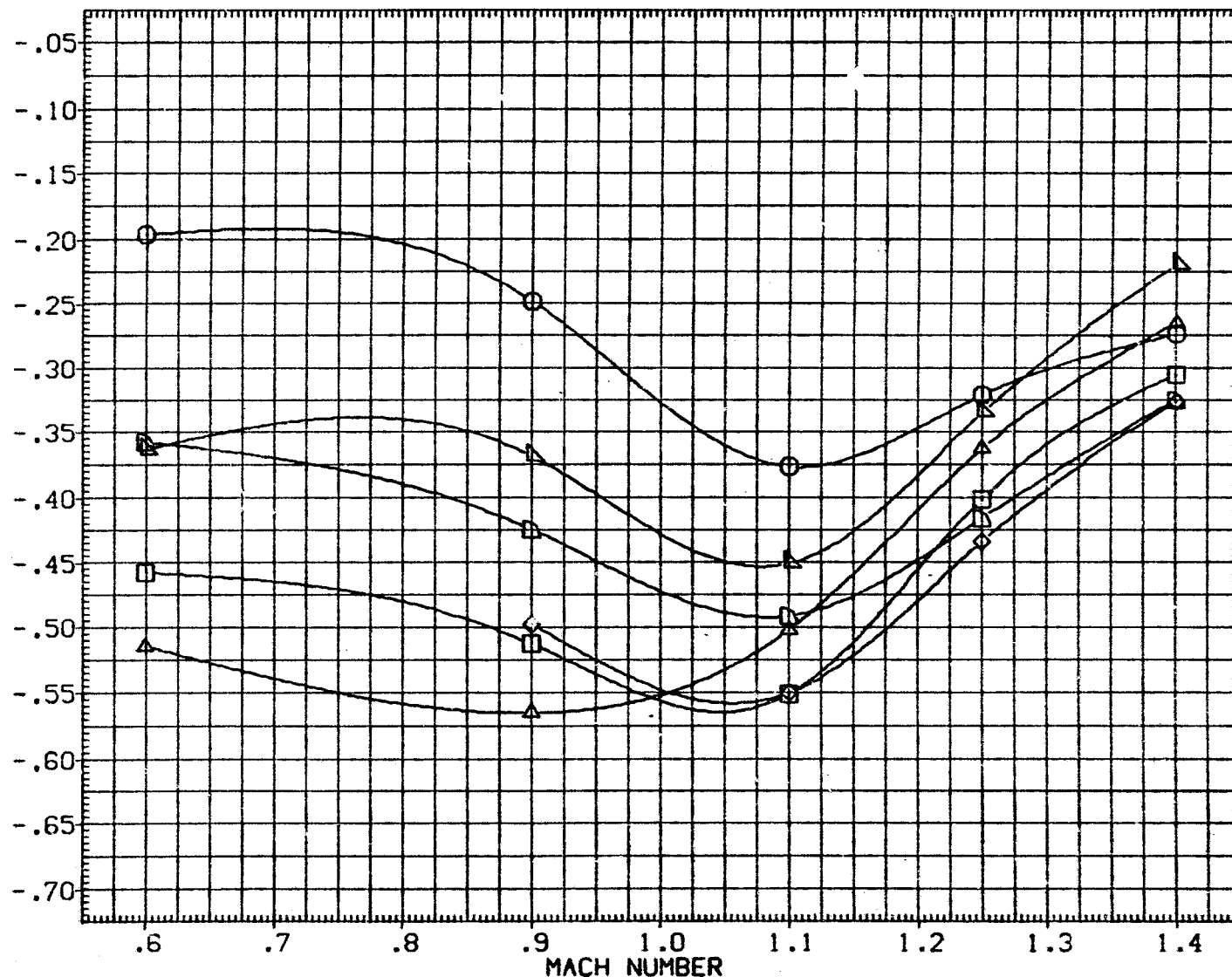


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 713) ORBITER BASE, CP713

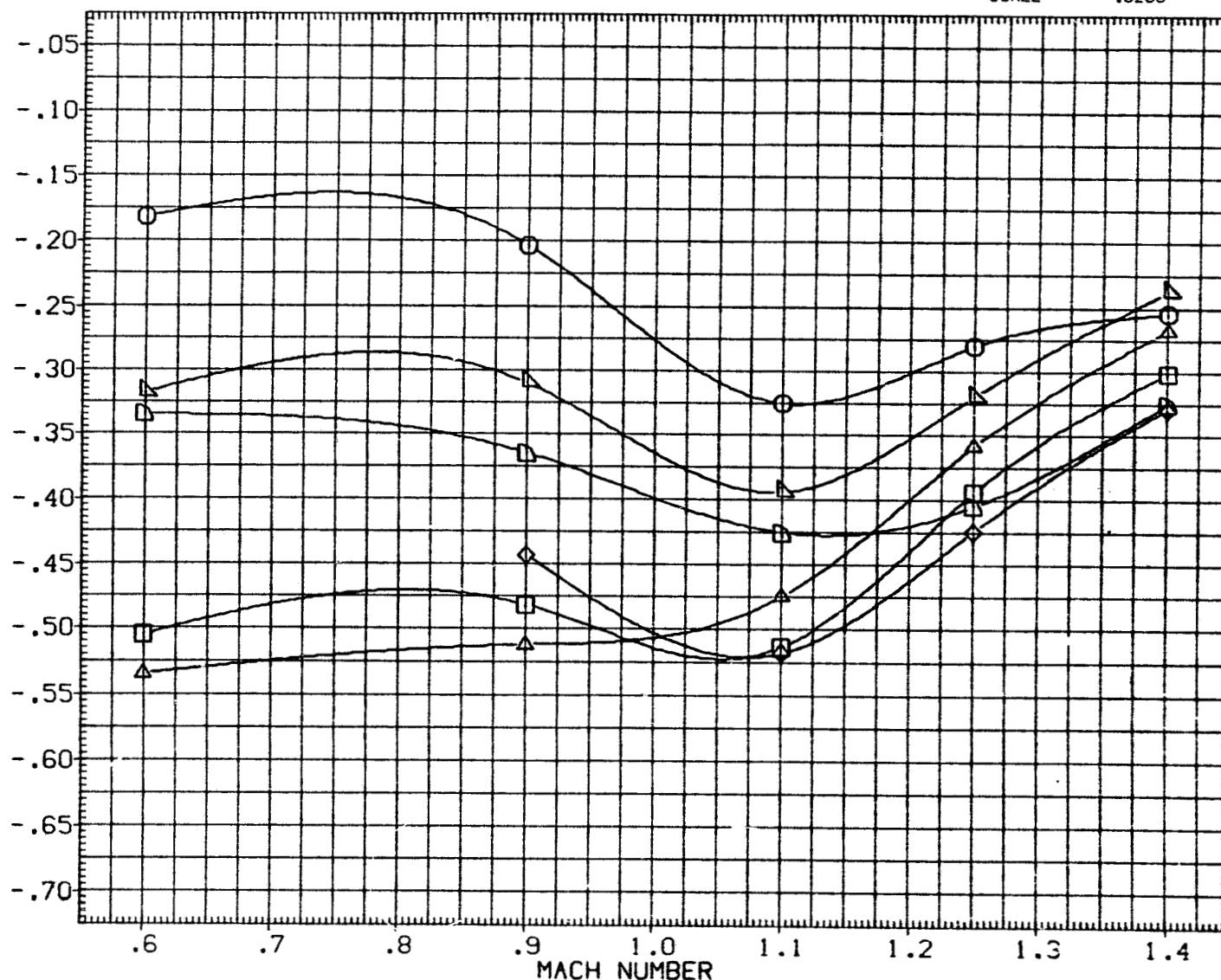


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(FE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(FE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(FE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(FE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(FE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(FE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 713) ORBITER BASE, CP713

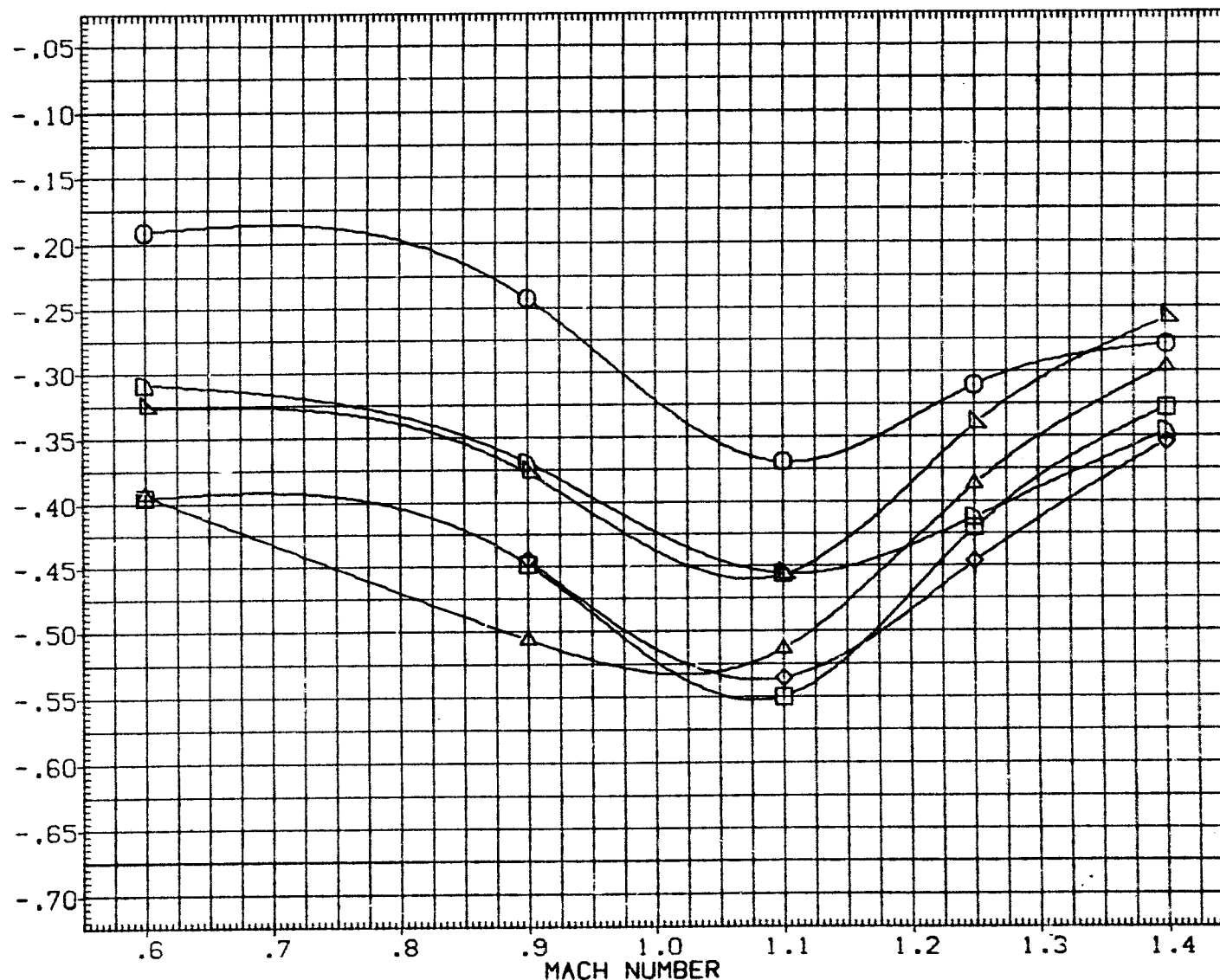


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C) BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 723) ORBITER BASE, CP723

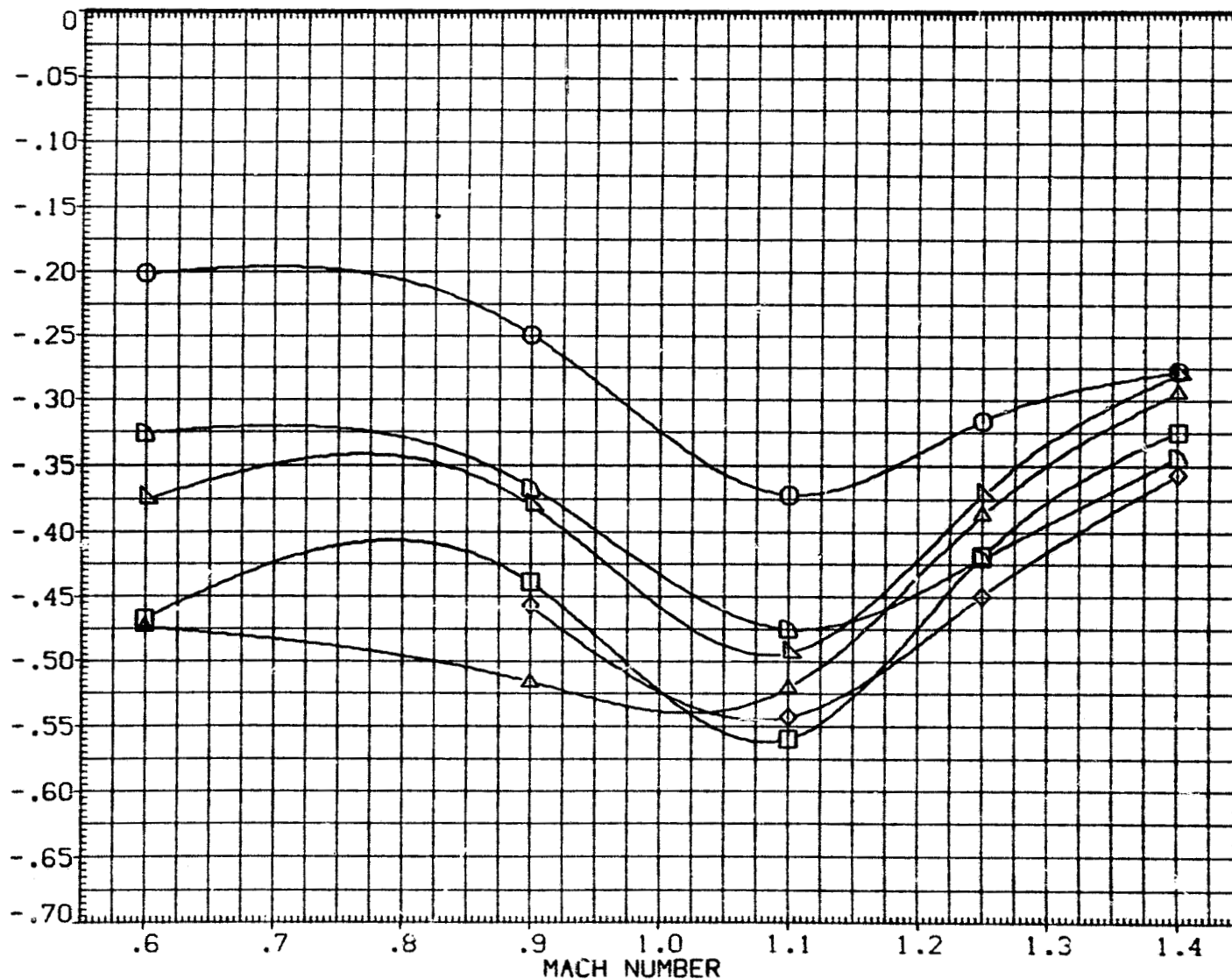


FIG. 125. EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50. FT.
(GE4020)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 723) ORBITER BASE. CP723

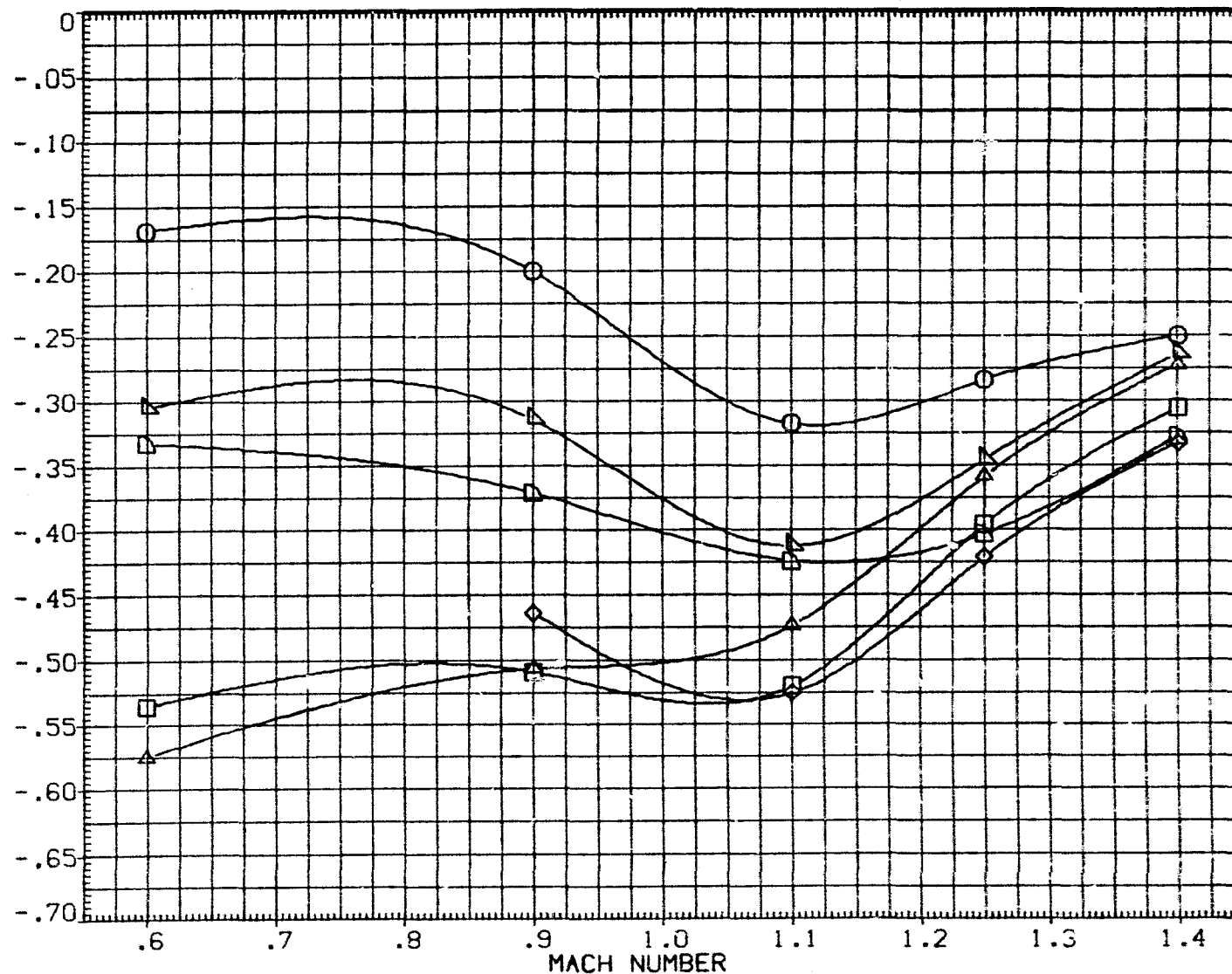


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 723) ORBITER BASE, CP723

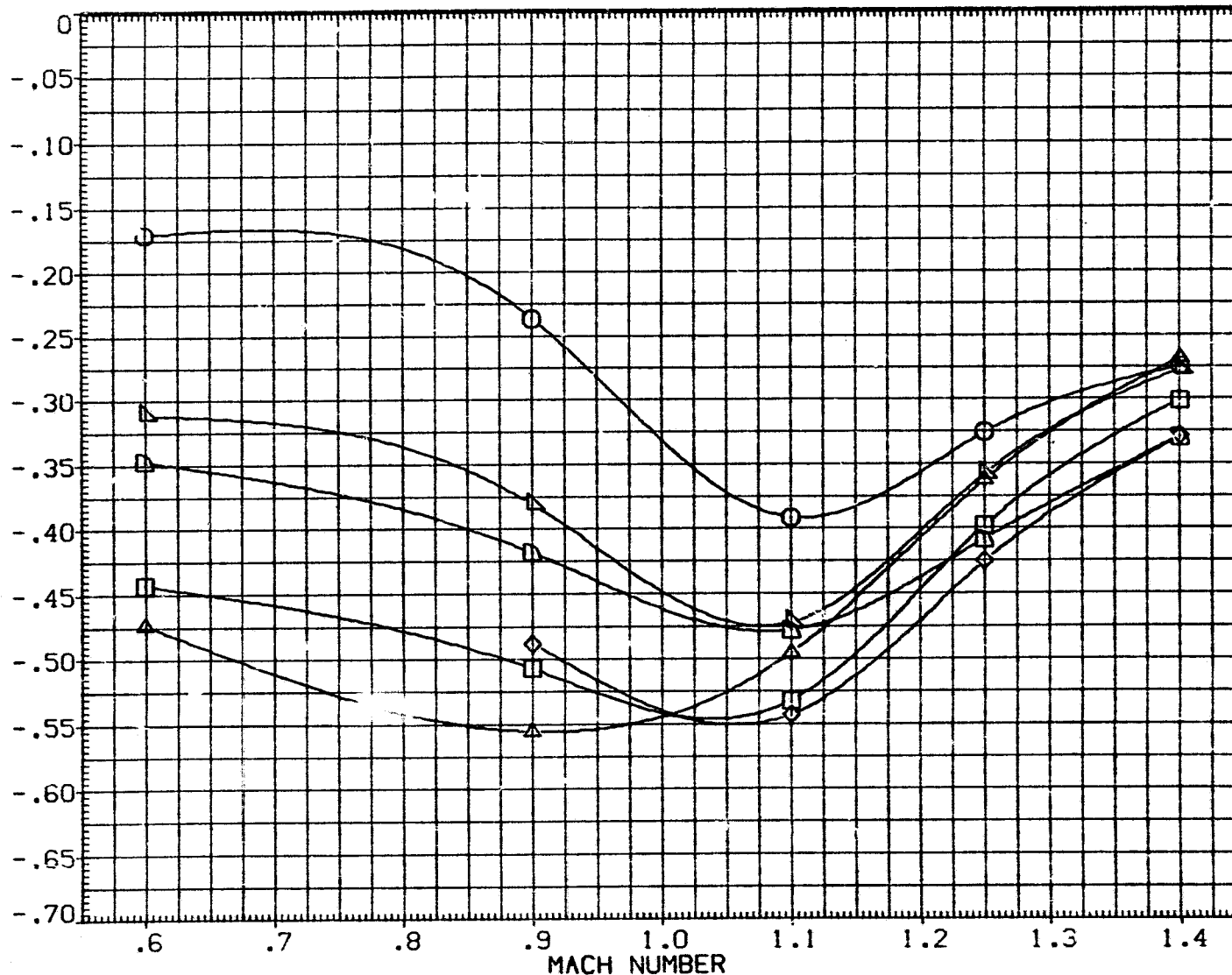


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C) BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

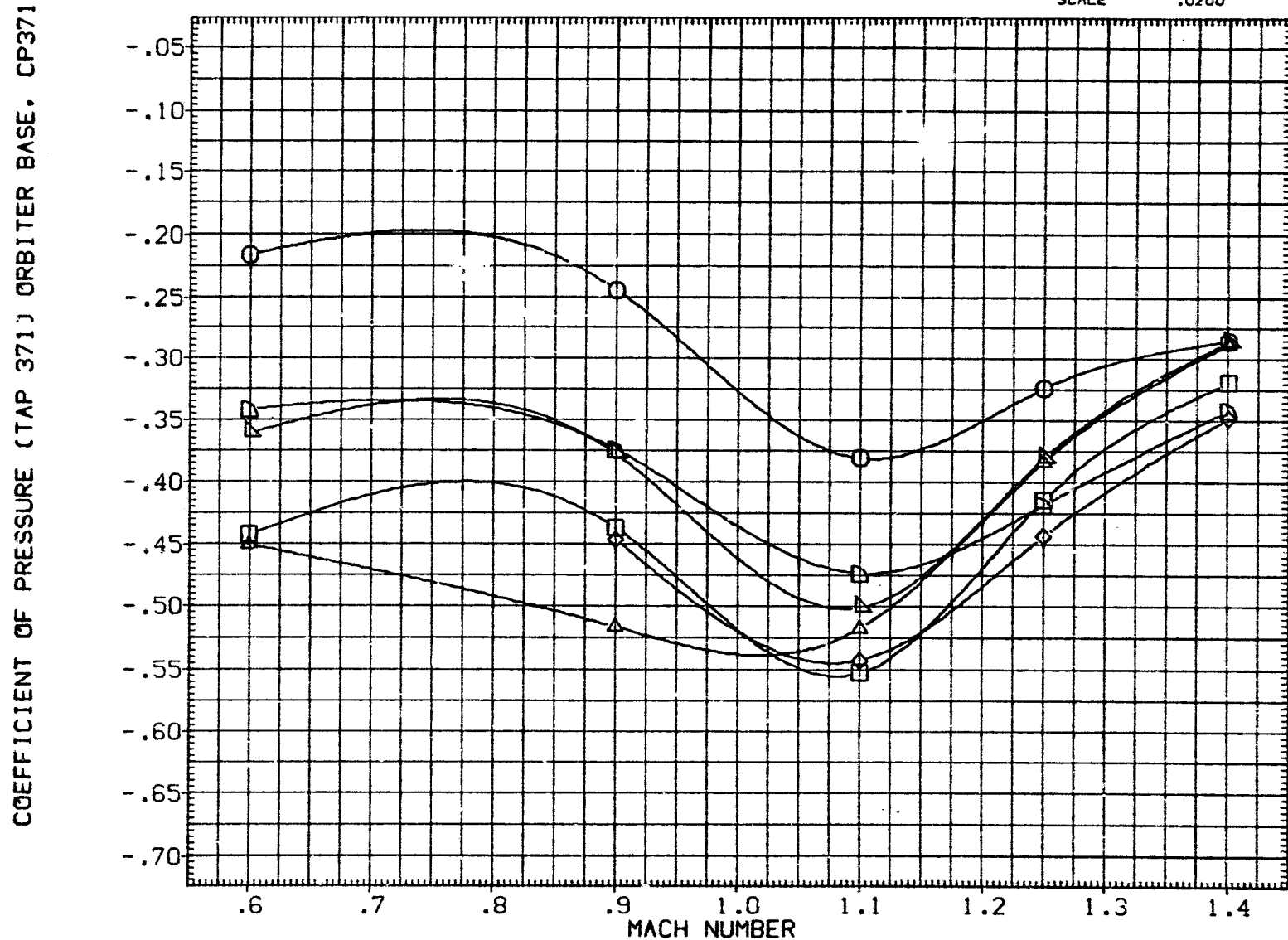


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SO.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 371) ORBITER BASE, CP371

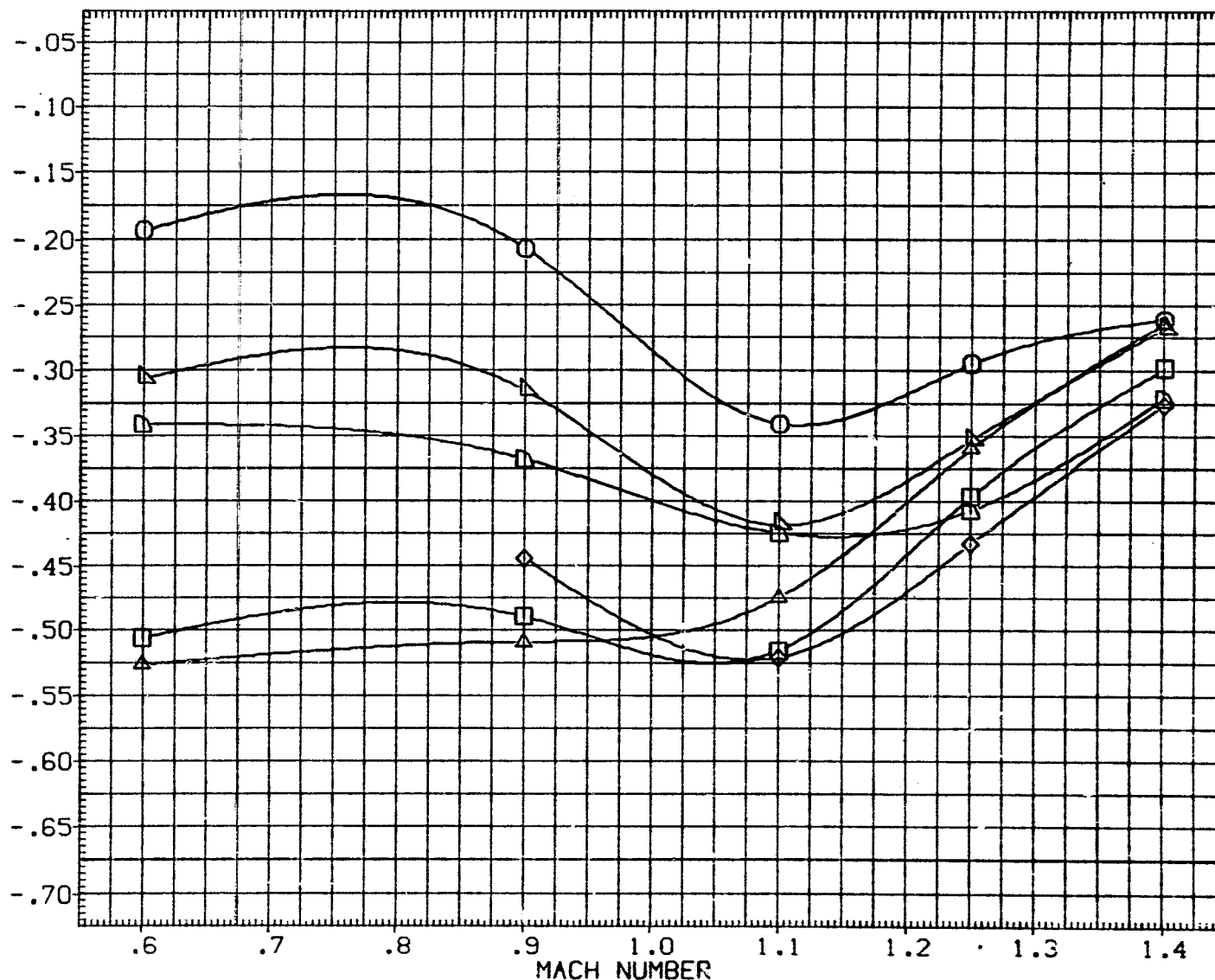


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000 SQ.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000 IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000 IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000 IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000 IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000 IN.
					SCALE	.0200

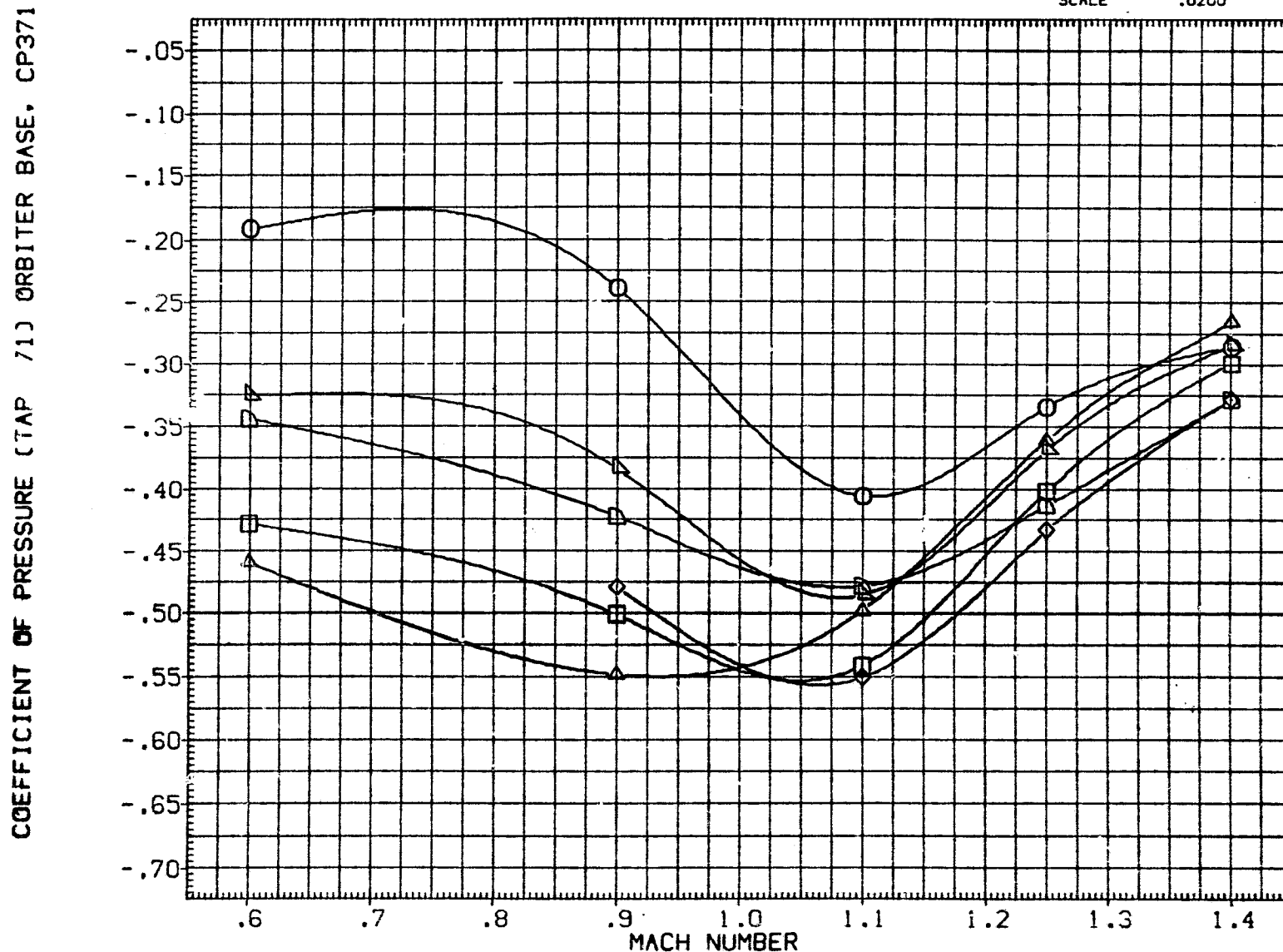


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SO.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 370) ORBITER BASE, CP370

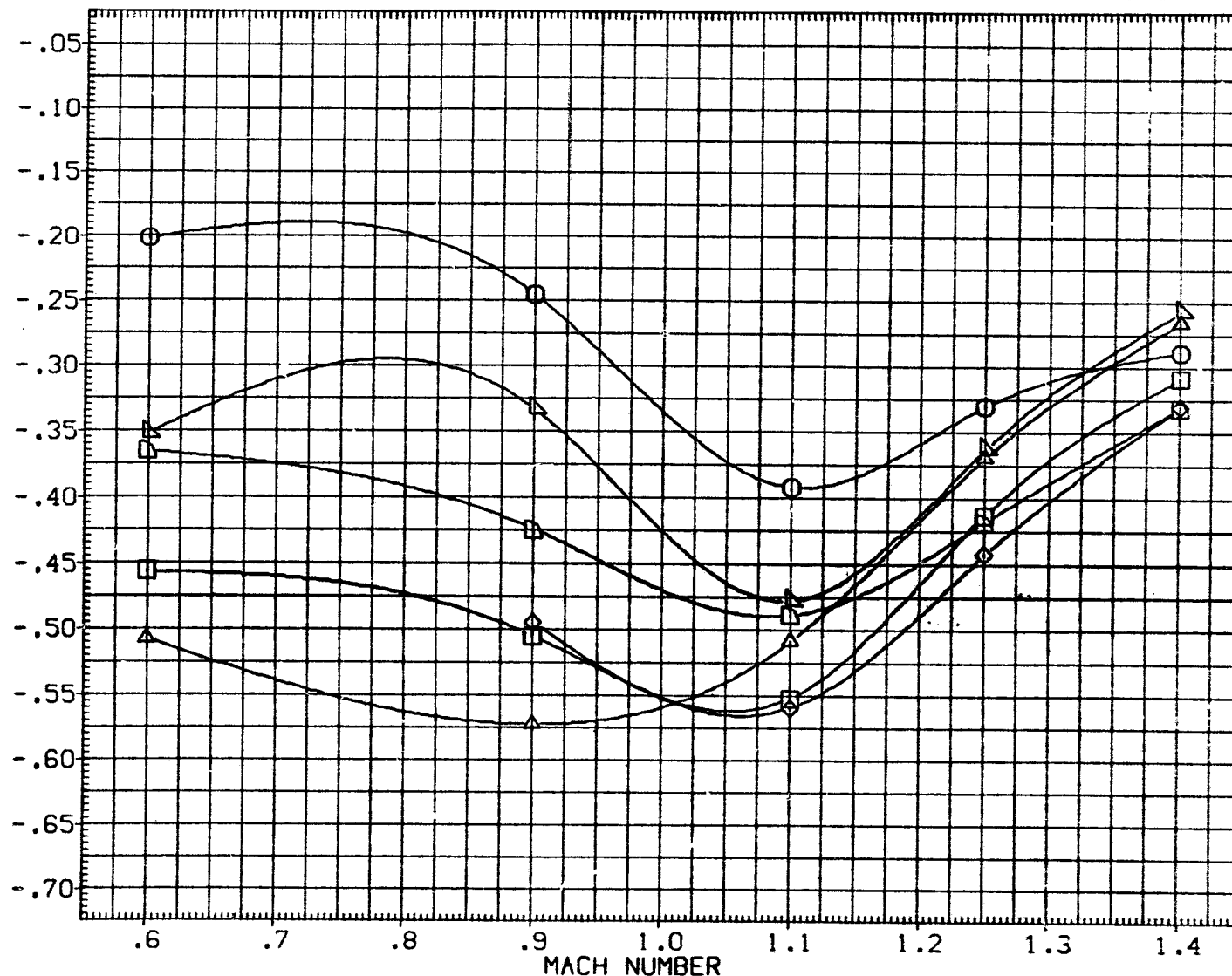


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(SE4029)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE40R0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 370) ORBITER BASE, CP370

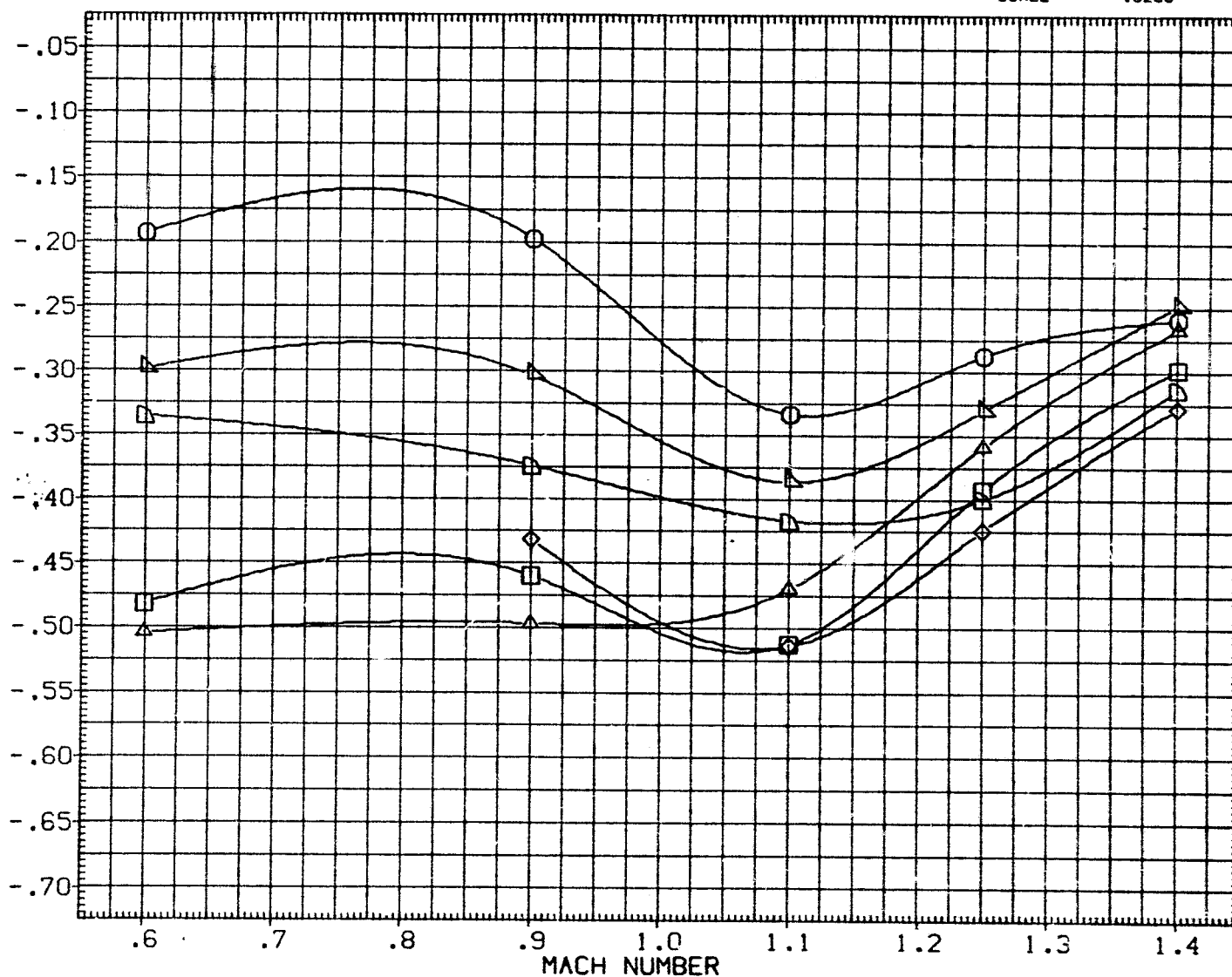


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(B) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1AB0 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(GE4020)	ARC 11-023 1AB0 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1AB0 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1AB0 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1AB0 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1AB0 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 370) ORBITER BASE, CP370

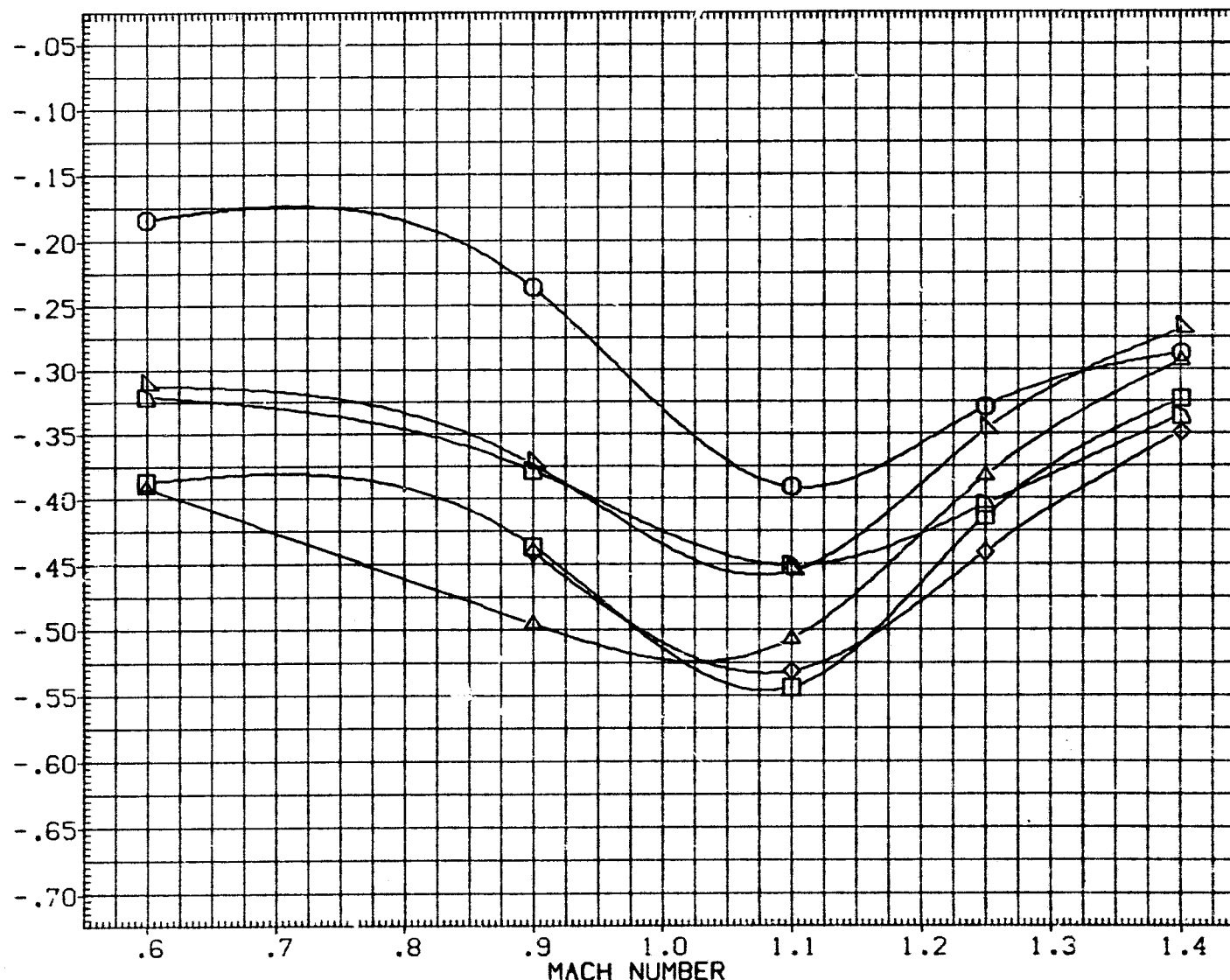


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(C) BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.300	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 724) ORBITER BASE, CP724

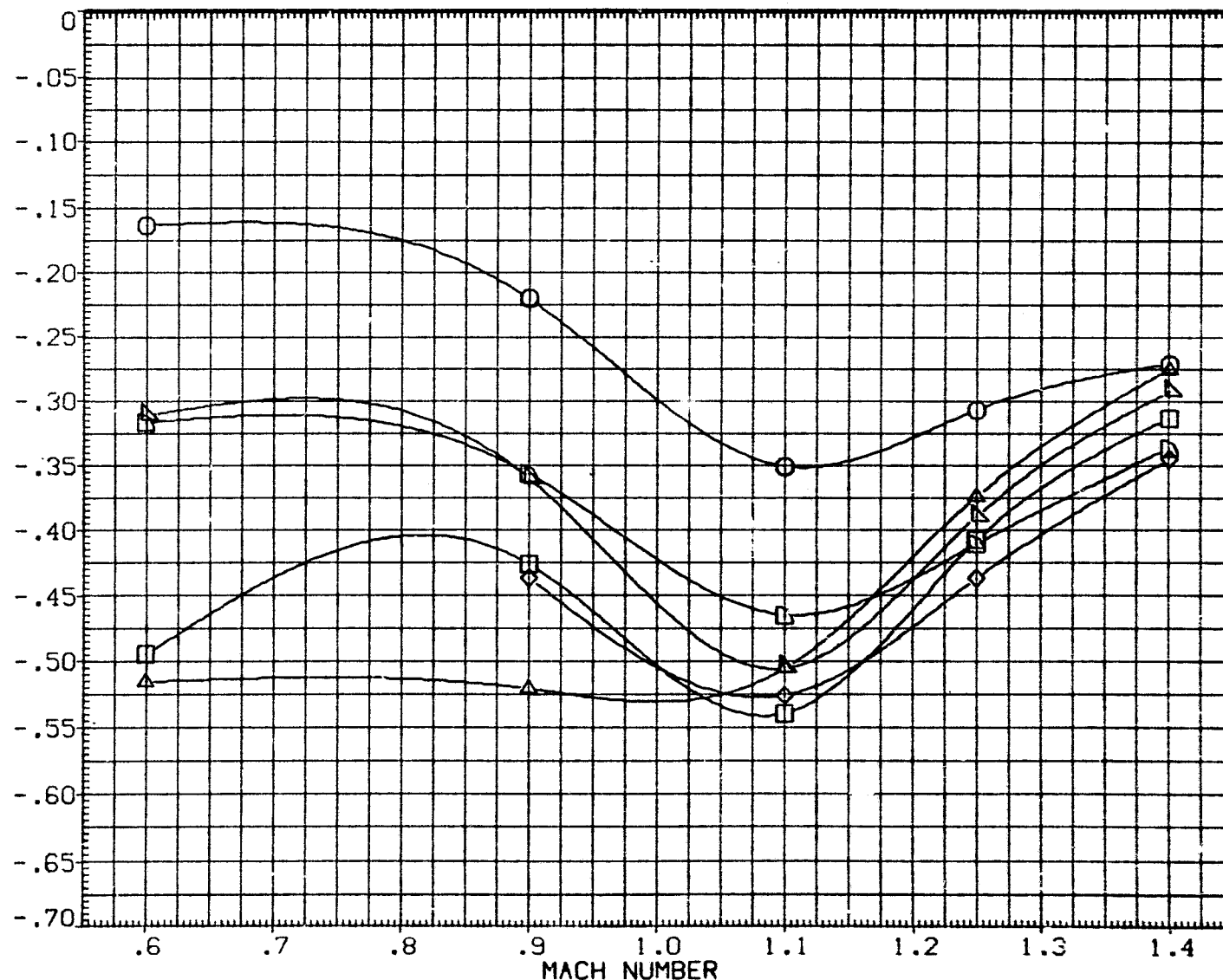


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0
(A) BETA = -4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	50.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE40B0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE40B5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 724) ORBITER BASE. CP724

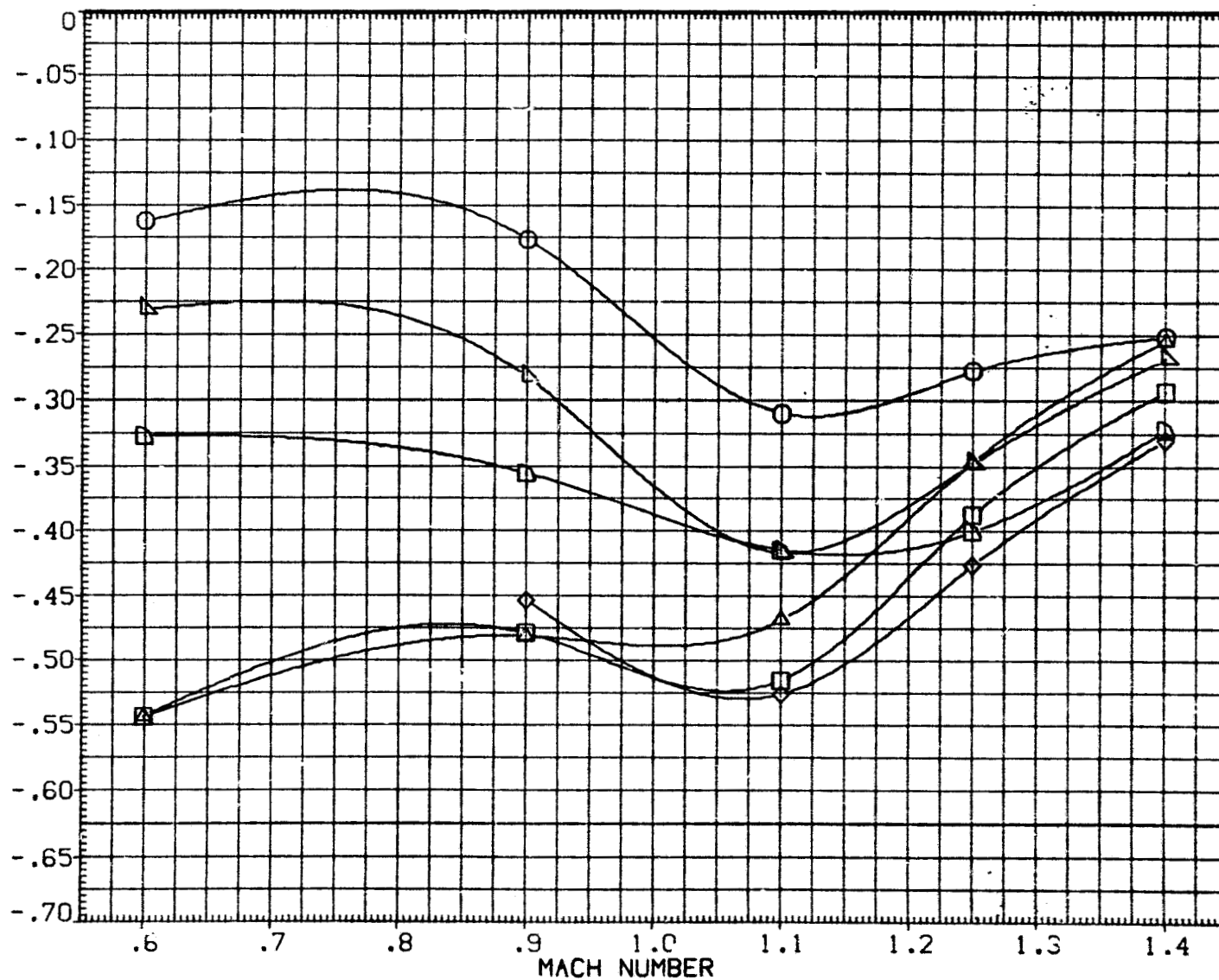


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(B)BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(GE4028)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	.000	SREF	2690.0000	SQ.FT.
(GE4020)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	.000	LREF	1290.3000	IN.
(GE4016)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	.000	BREF	1290.3000	IN.
(GE4011)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	.000	XMRP	.0000	IN.
(GE4080)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	.000	YMRP	.0000	IN.
(GE4085)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 724) ORBITER BASE, CP724

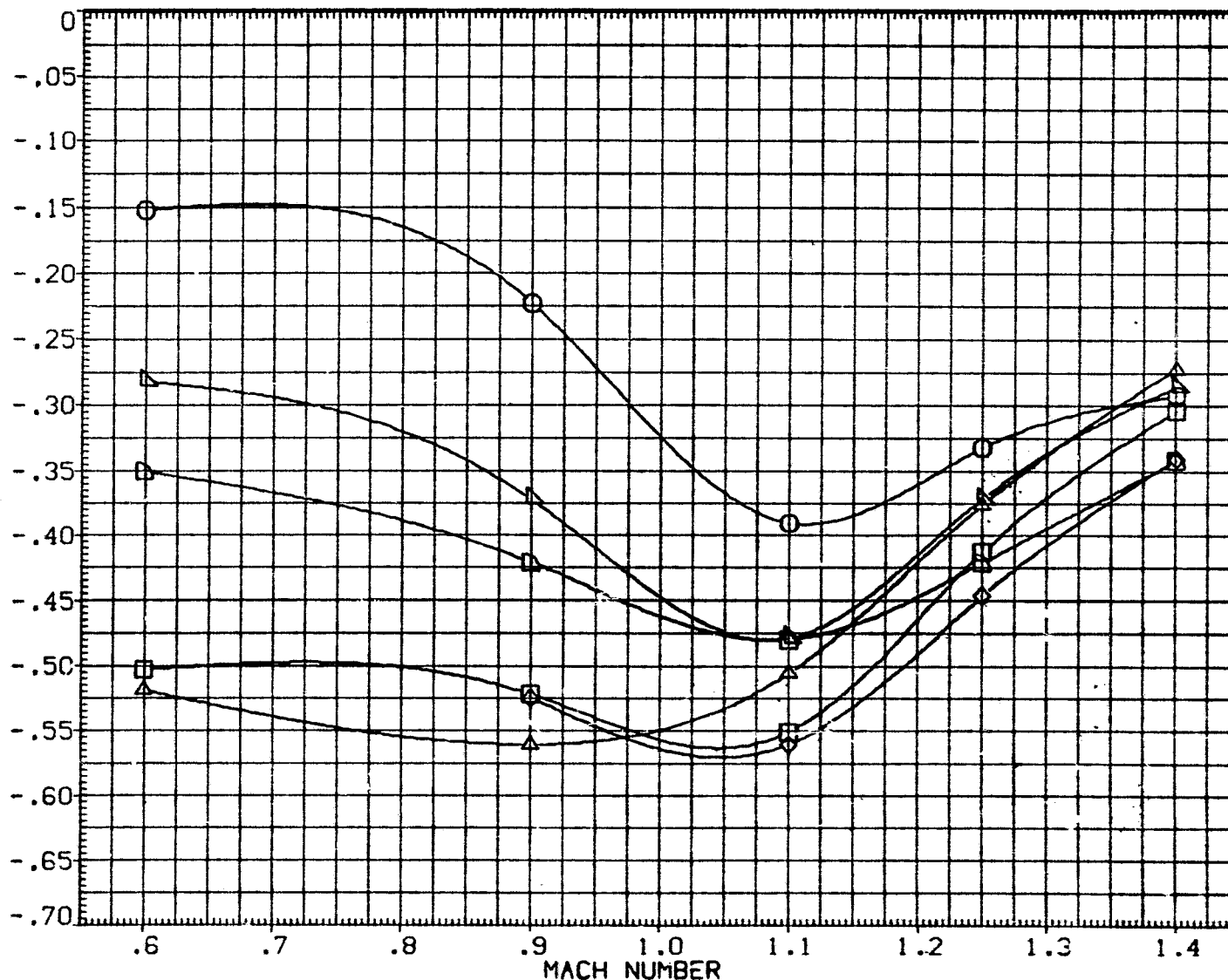


FIG. 125 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=0.0

(C)BETA = 4.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2650.0000	SQ.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(AE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(AE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(AE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 379) ORBITER BASE. CP379

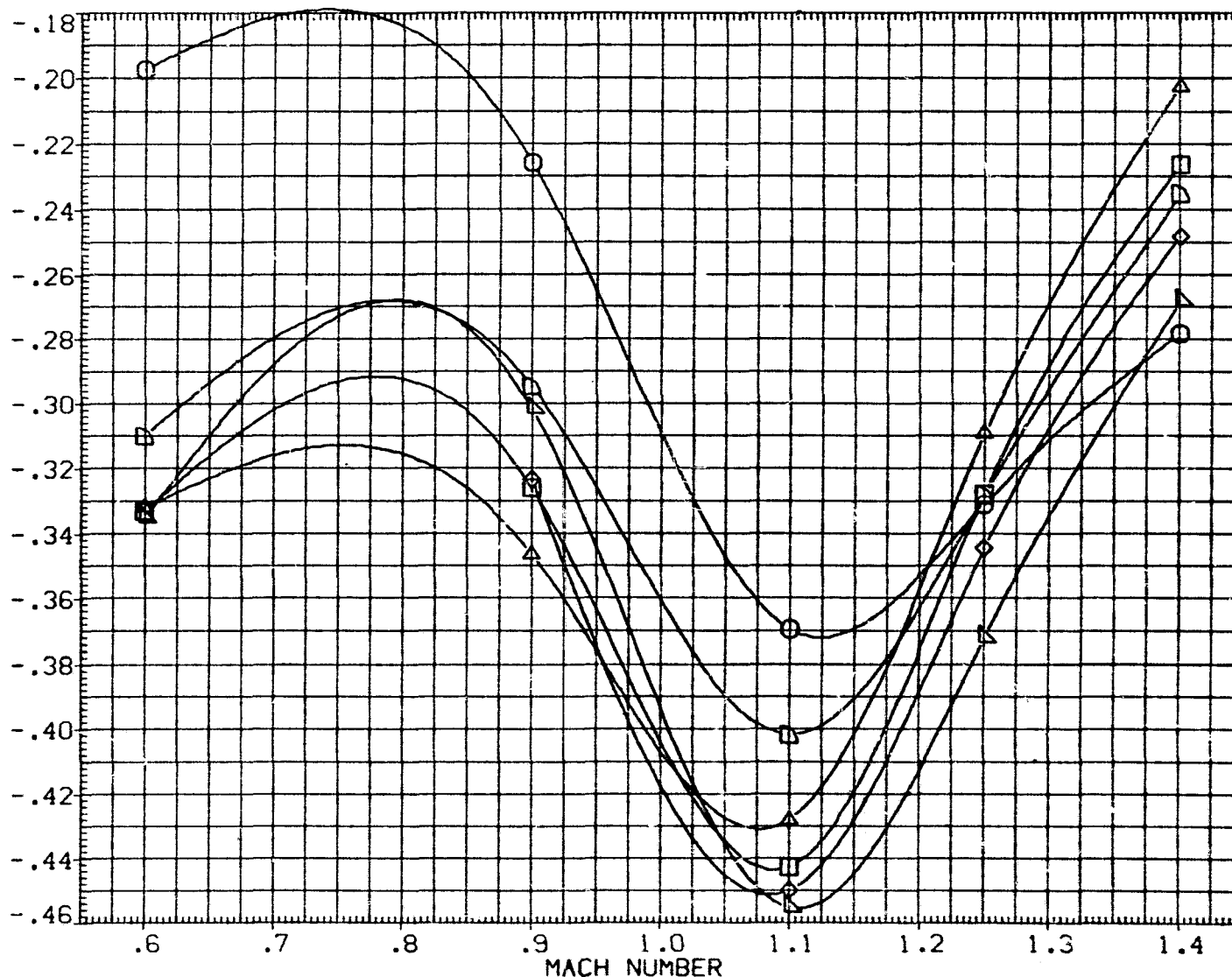


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION		
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	50.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(AE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(AE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(AE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 717) ORBITER BASE, CP717

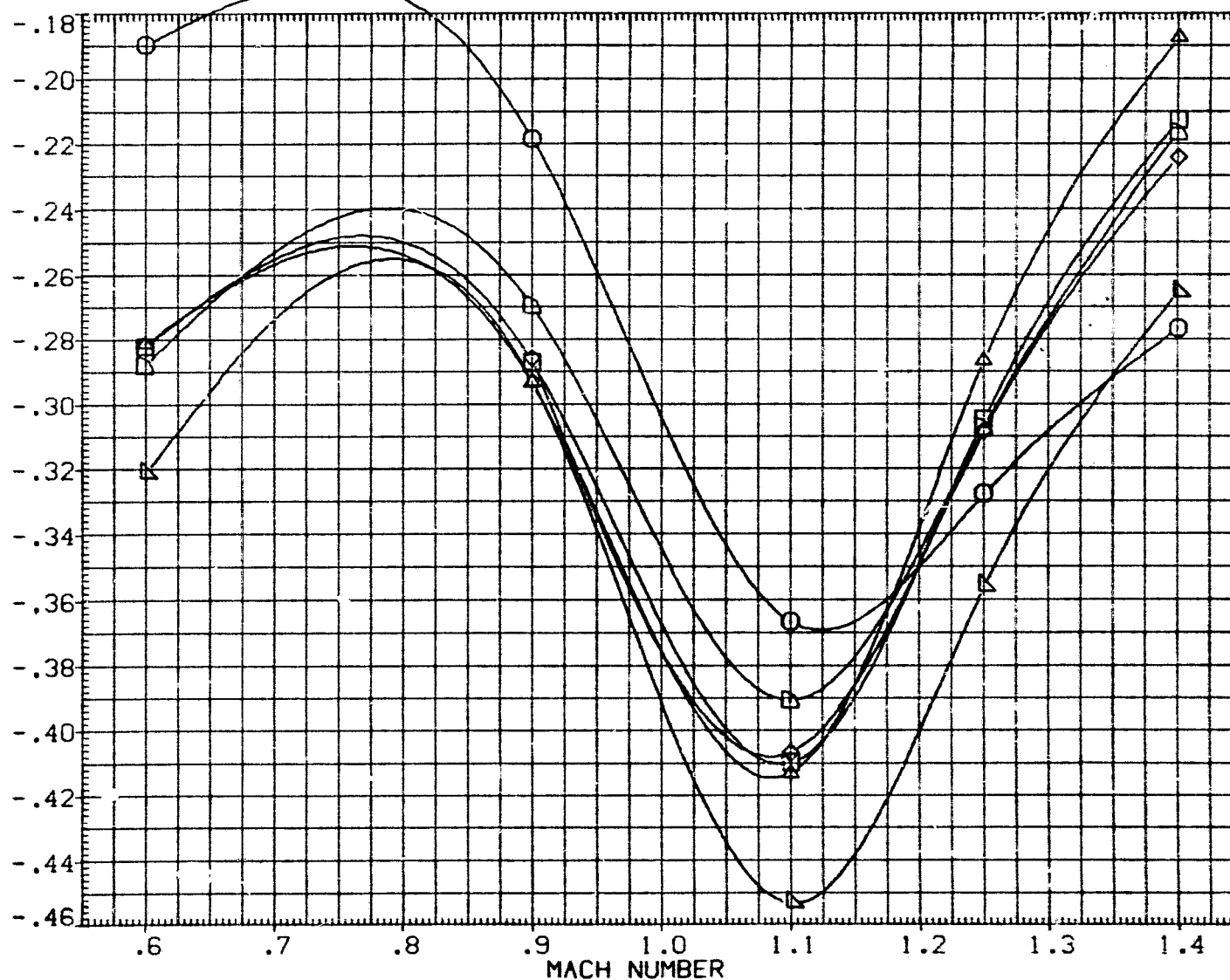


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF 2690.0000 SQ.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF 1290.3000 IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF 1290.3000 IN.
(AE4P11)	ARC 11-023 1A90 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XHRP .0050 IN.
(AE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YHRP .0000 IN.
(AE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZHRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 380) ORBITER BASE, CP380

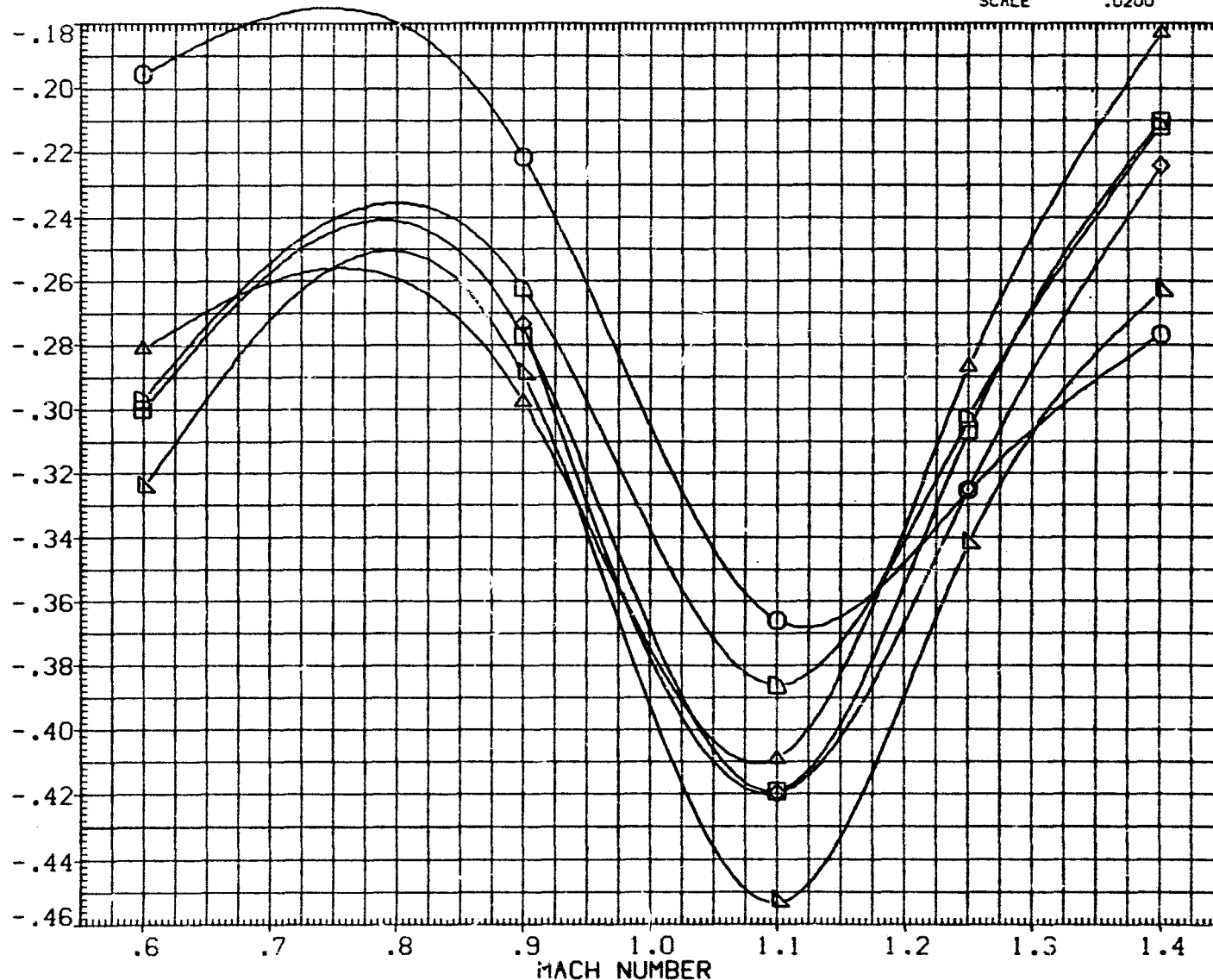


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(AE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(AE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(AE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 718) ORBITER BASE, CP718

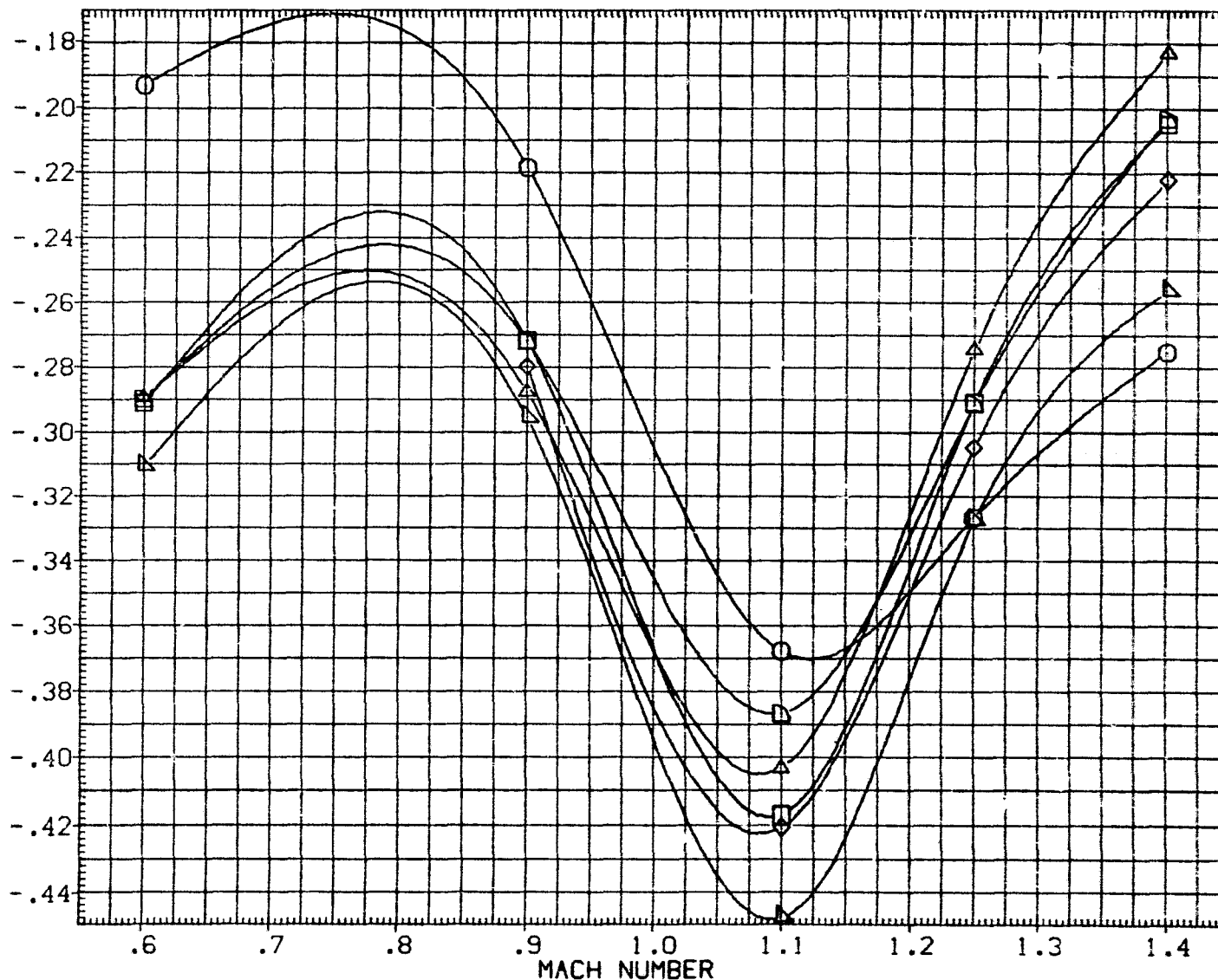


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4P28)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(AE4P20)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(AE4P16)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(AE4P11)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(AE4PB0)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(AE4PB5)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 381) ORBITER BASE, CP381

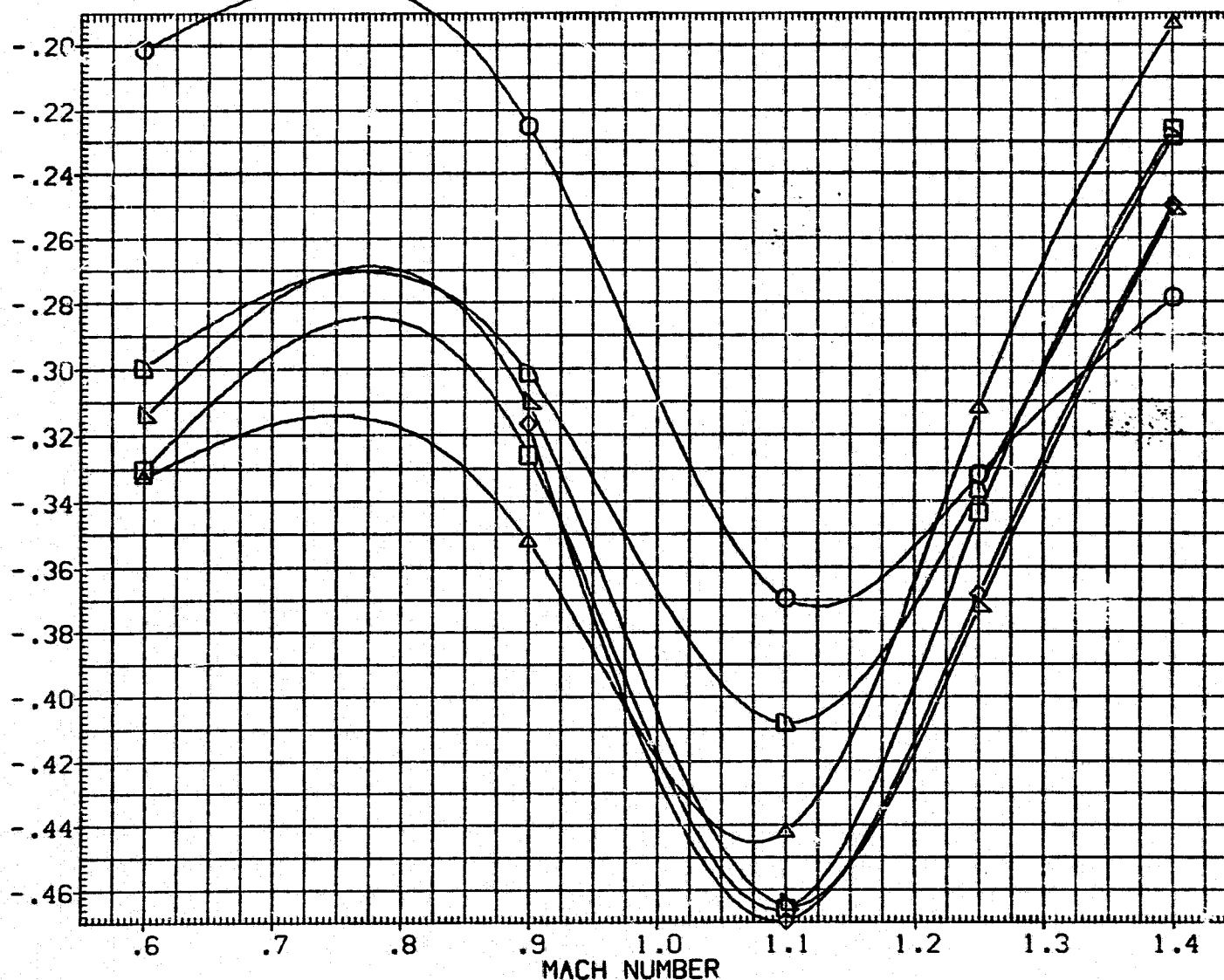


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	SQ.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(AE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(AE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(AE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

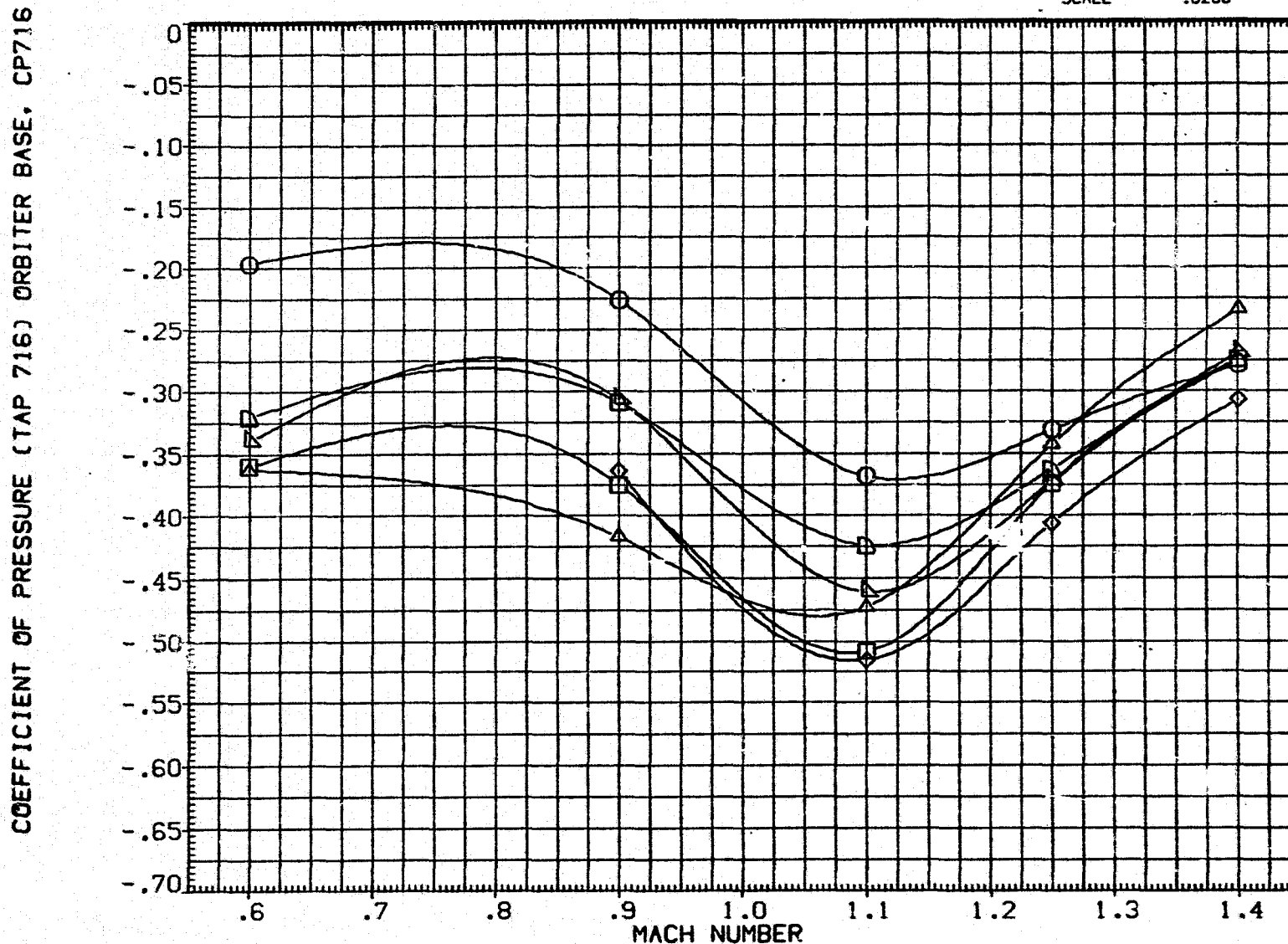


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(AE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(AE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(AE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

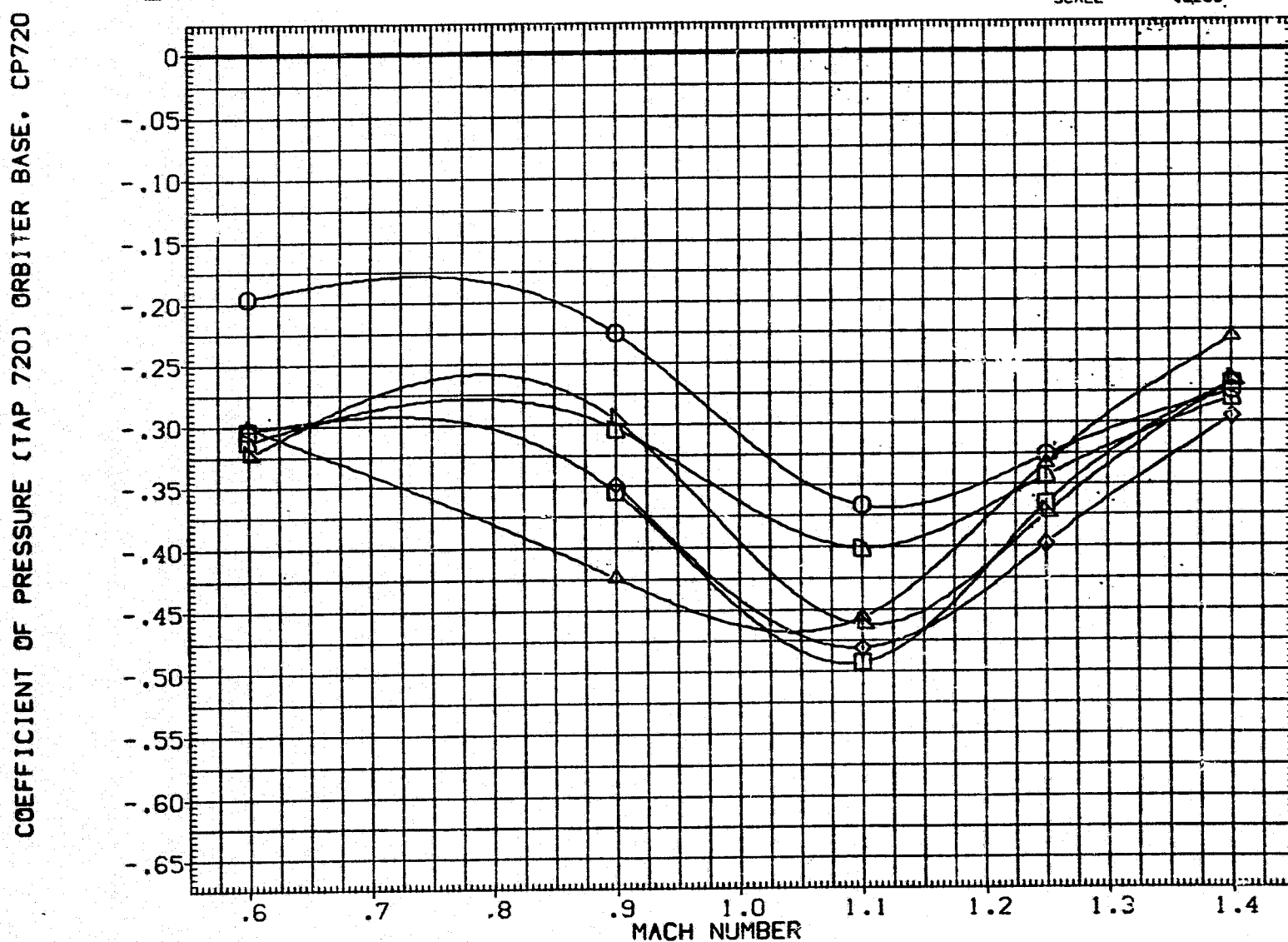


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A)BETA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(AE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(AE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(AE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(AE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(AE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(AE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

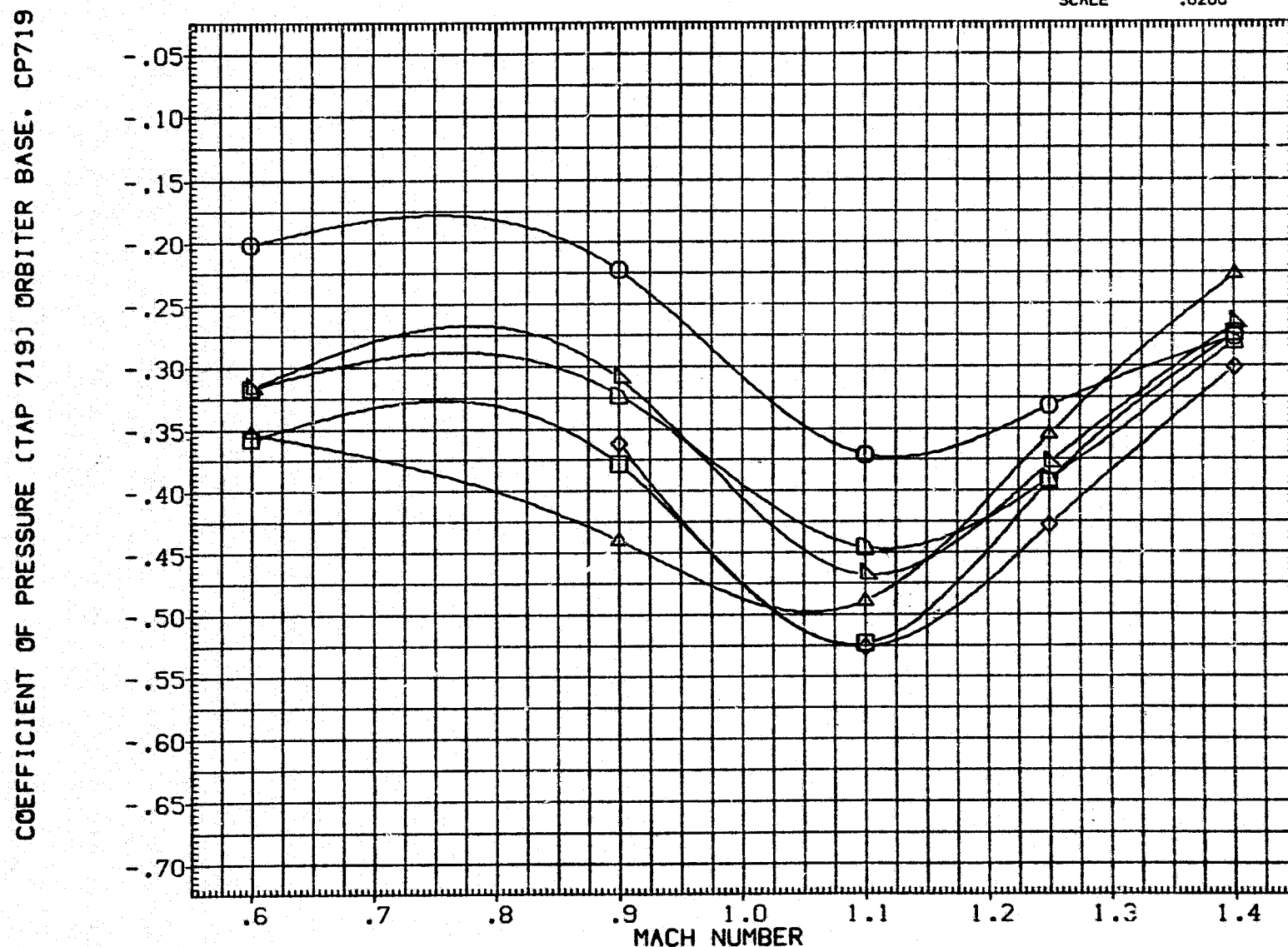


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A)BETA = .00

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(AE4P28)	ARC 11-023 1A80 QTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	SQ.FT.
(AE4P20)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(AE4P16)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	4.000	BREF	1290.3000	IN.
(AE4P11)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)	.000	.000	4.000	XMRP	.0000	IN.
(AE4P80)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(AE4P85)	ARC 11-023 1A80 QTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 719) ORBITER BASE. CP719

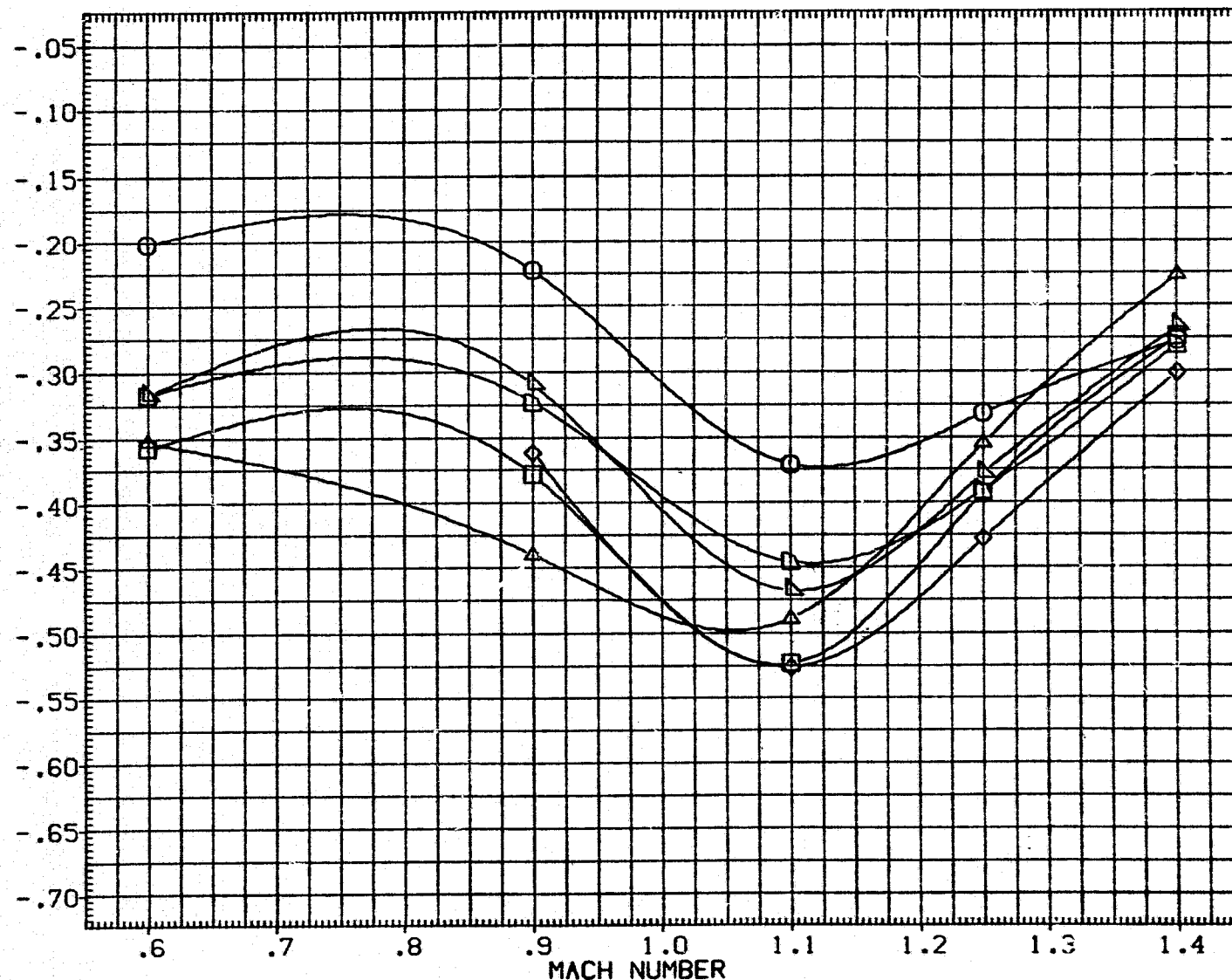


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	AL 4A	REFERENCE INFORMATION		
(AE4P28)	ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	SQ.FT.
(AE4P20)	ARC 11-023 IA80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(AE4P16)	ARC 11-023 IA80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(AE4P11)	ARC 11-023 IA80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(AE4PB0)	ARC 11-023 IA80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(AE4PB5)	ARC 11-023 IA80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 374) ORBITER BASE. CP374

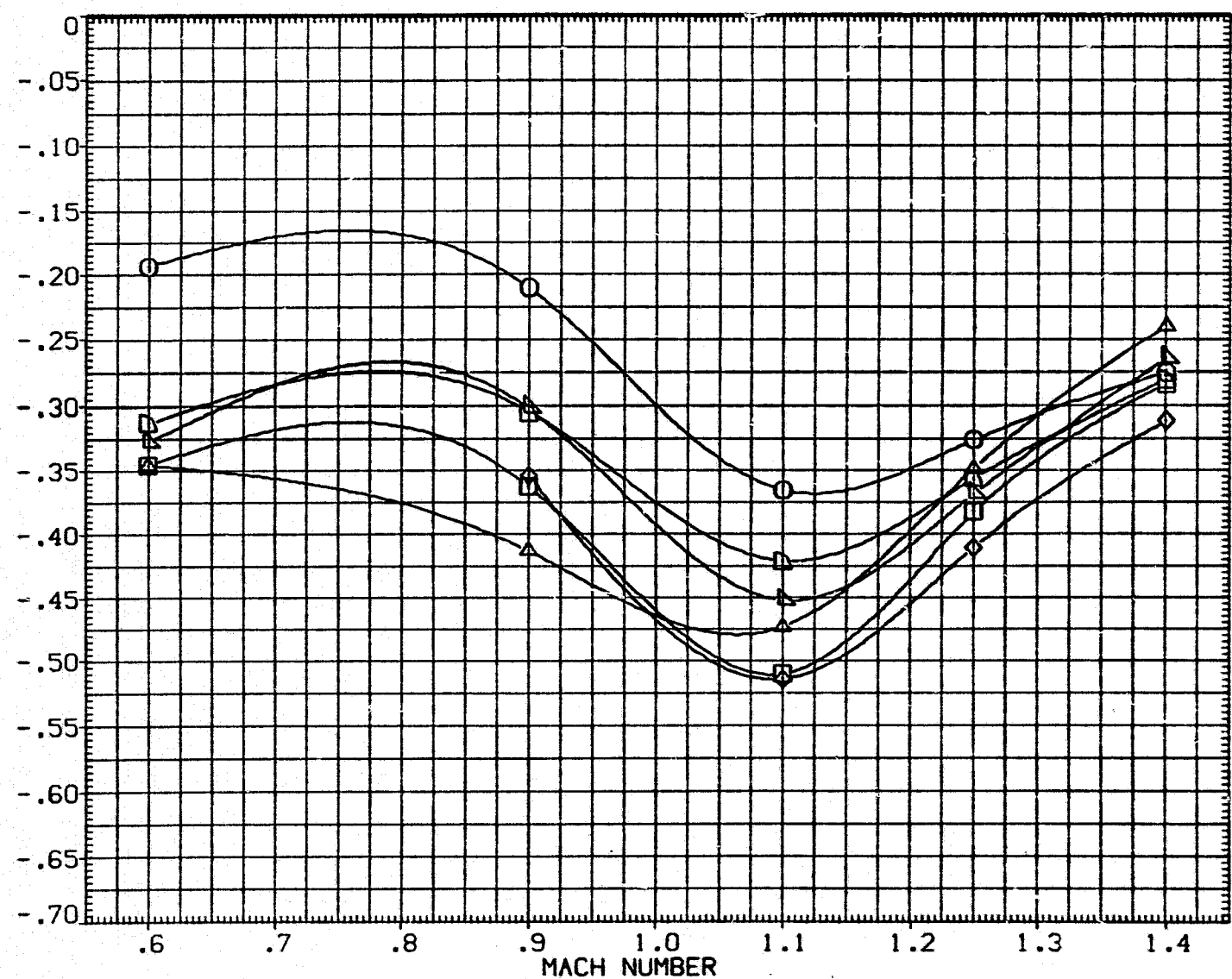


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION
(AE4P28)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF 2690.0000 SQ.FT.
(AE4P20)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF 1290.3000 IN.
(AE4P16)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF 1290.3000 IN.
(AE4P11)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP .0000 IN.
(AE4PB0)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP .0000 IN.
(AE4PB5)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 376) ORBITER BASE. CP376

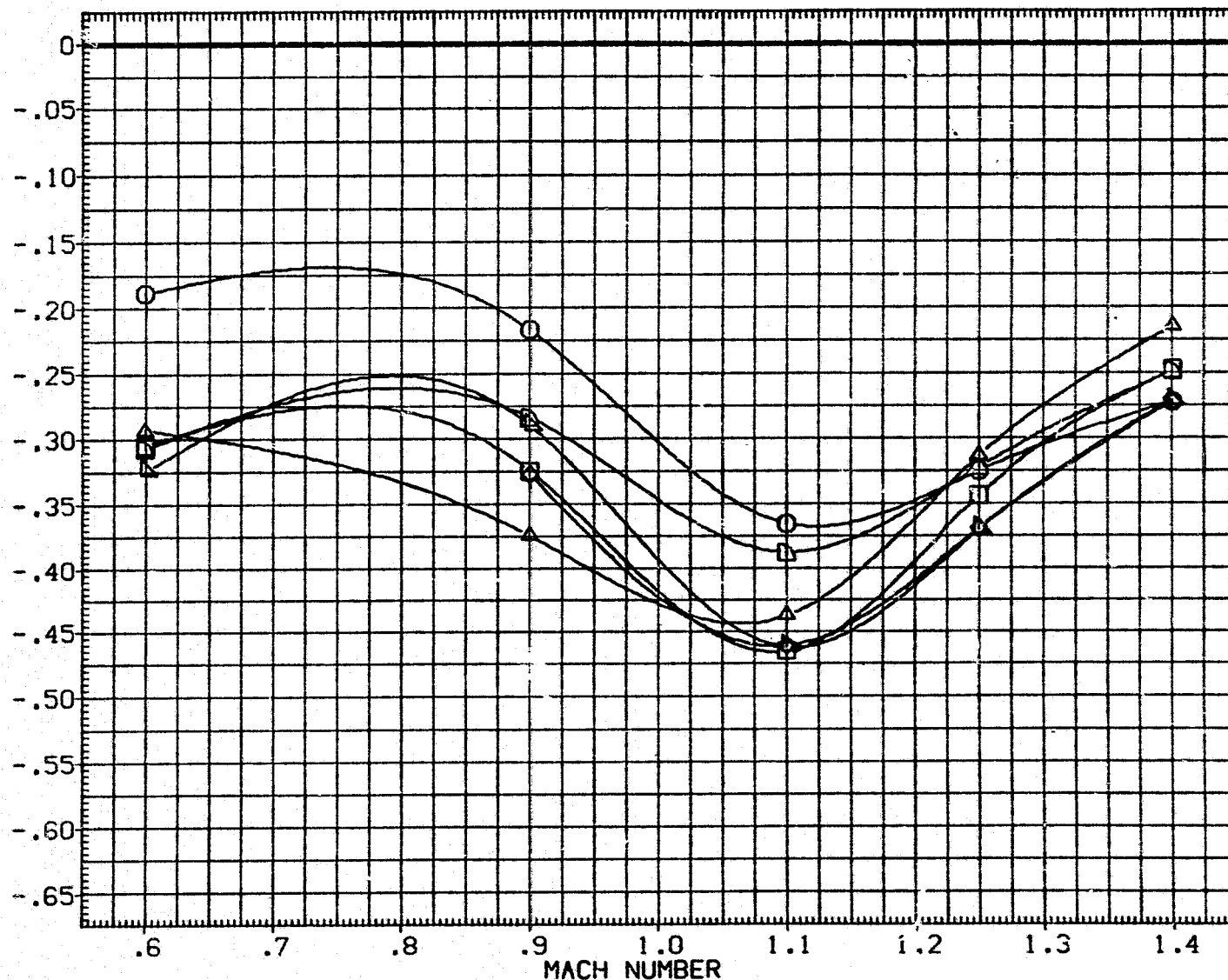


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(FE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(FE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 378) ORBITER BASE, CP378

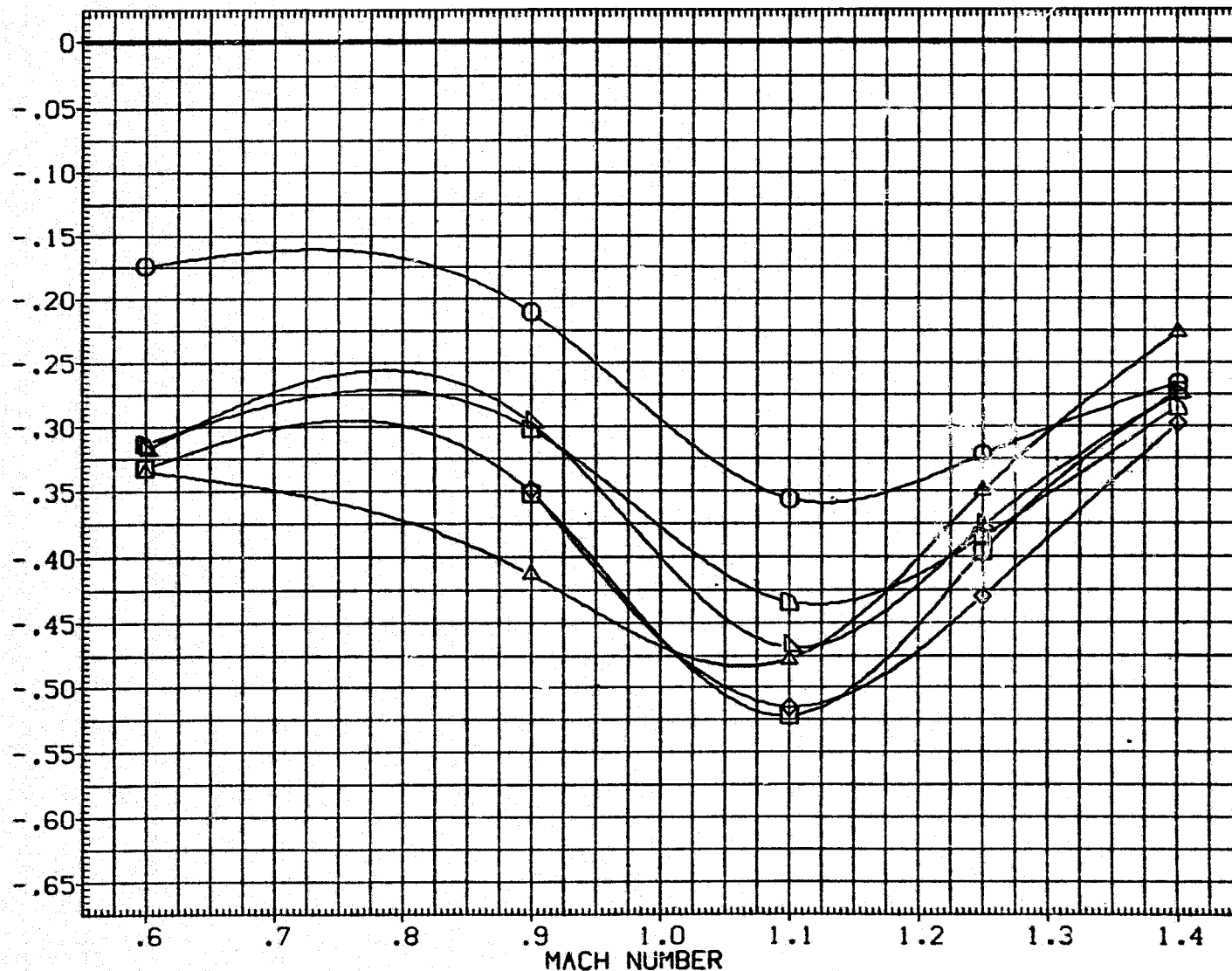
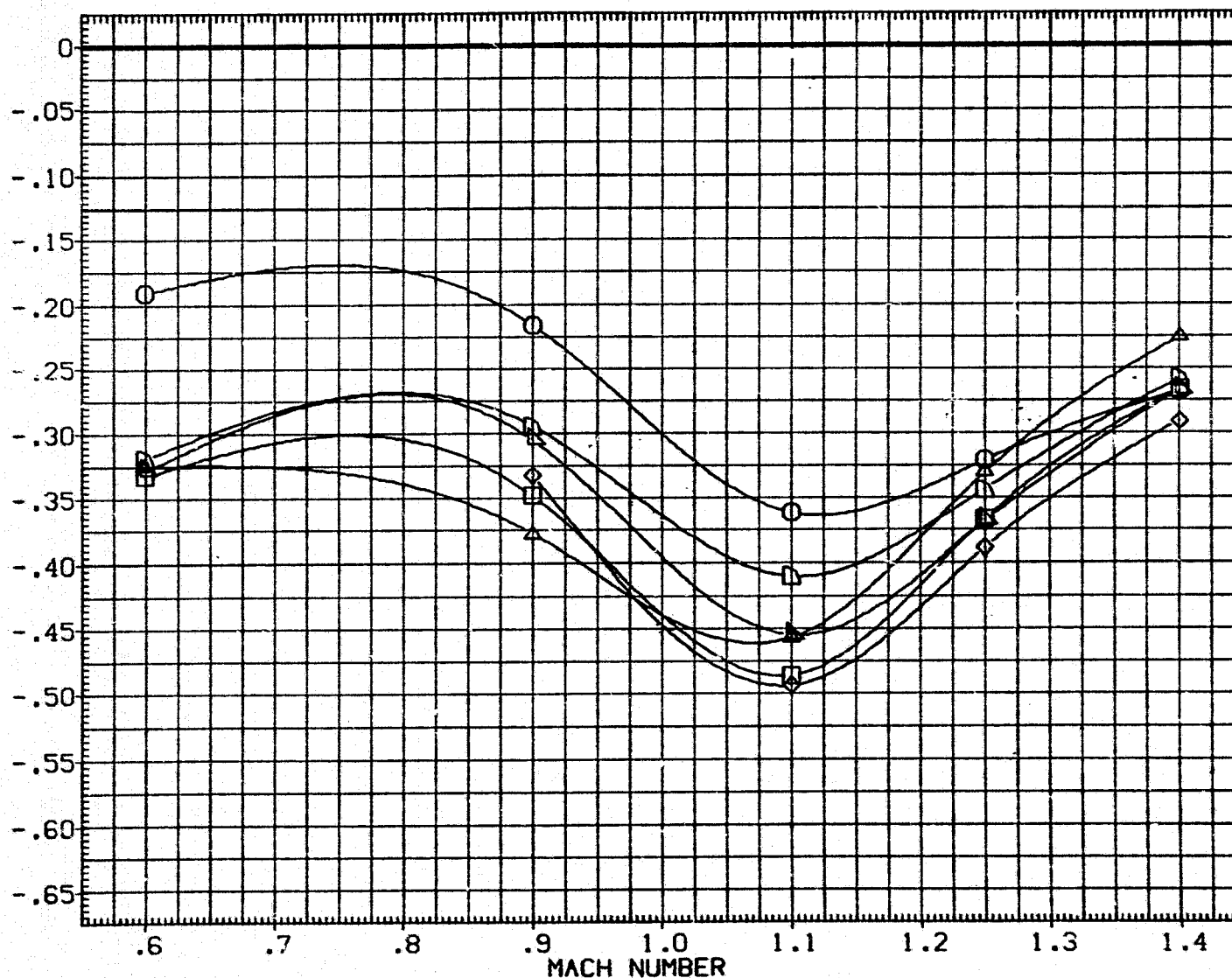


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION		
(FE4P28)	ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	SQ.FT.
(FE4P20)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(FE4P16)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(FE4P11)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(FE4P80)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(FE4P85)	ARC 11-023 1A80 0TS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 715) ORBITER BASE. CP715



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(FE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(FE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 375) ORBITER BASE. CP375

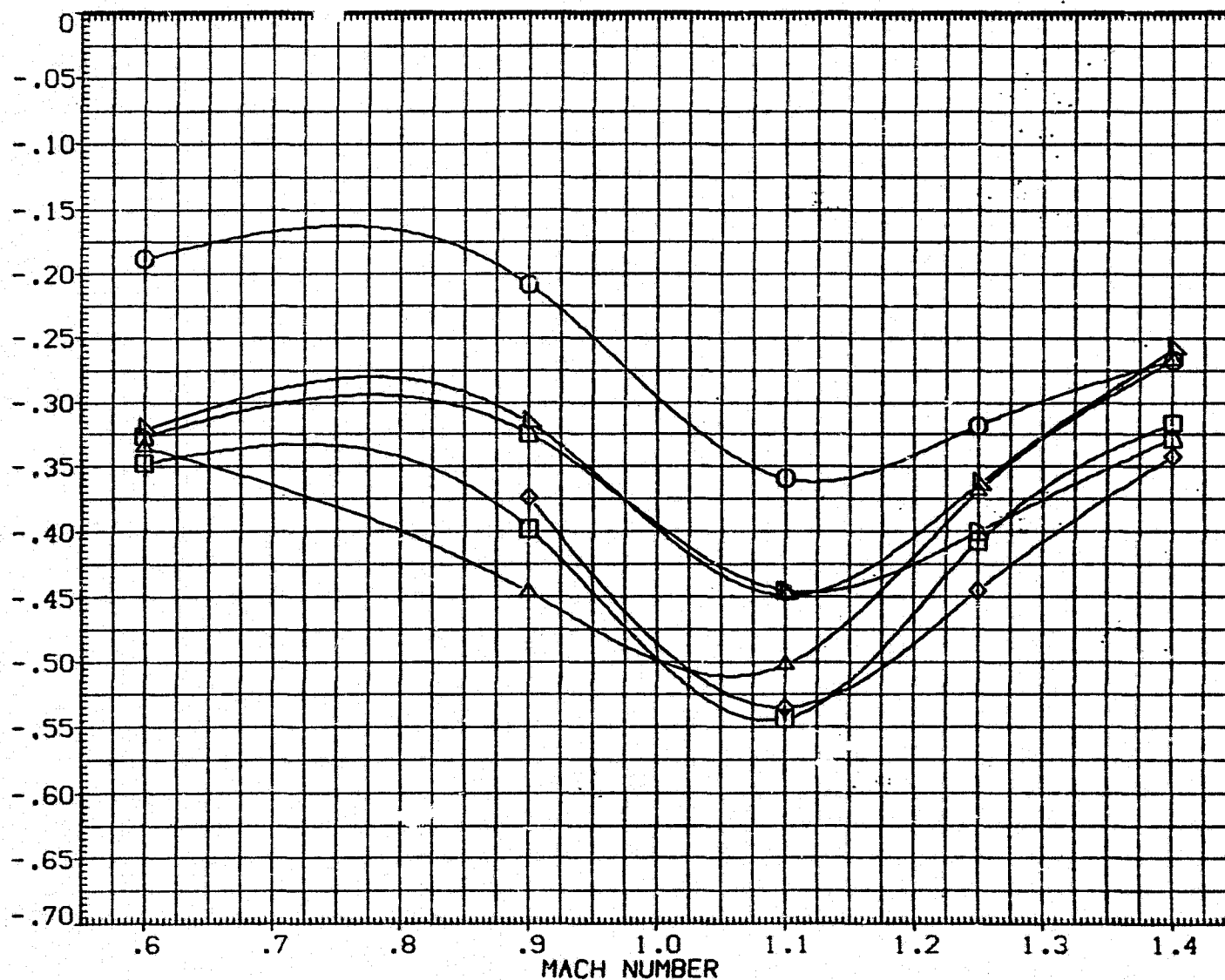


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-28	ALPHA	REFERENCE INFORMATION		
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	50.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(FE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(FE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 337) ORBITER BASE, CP377

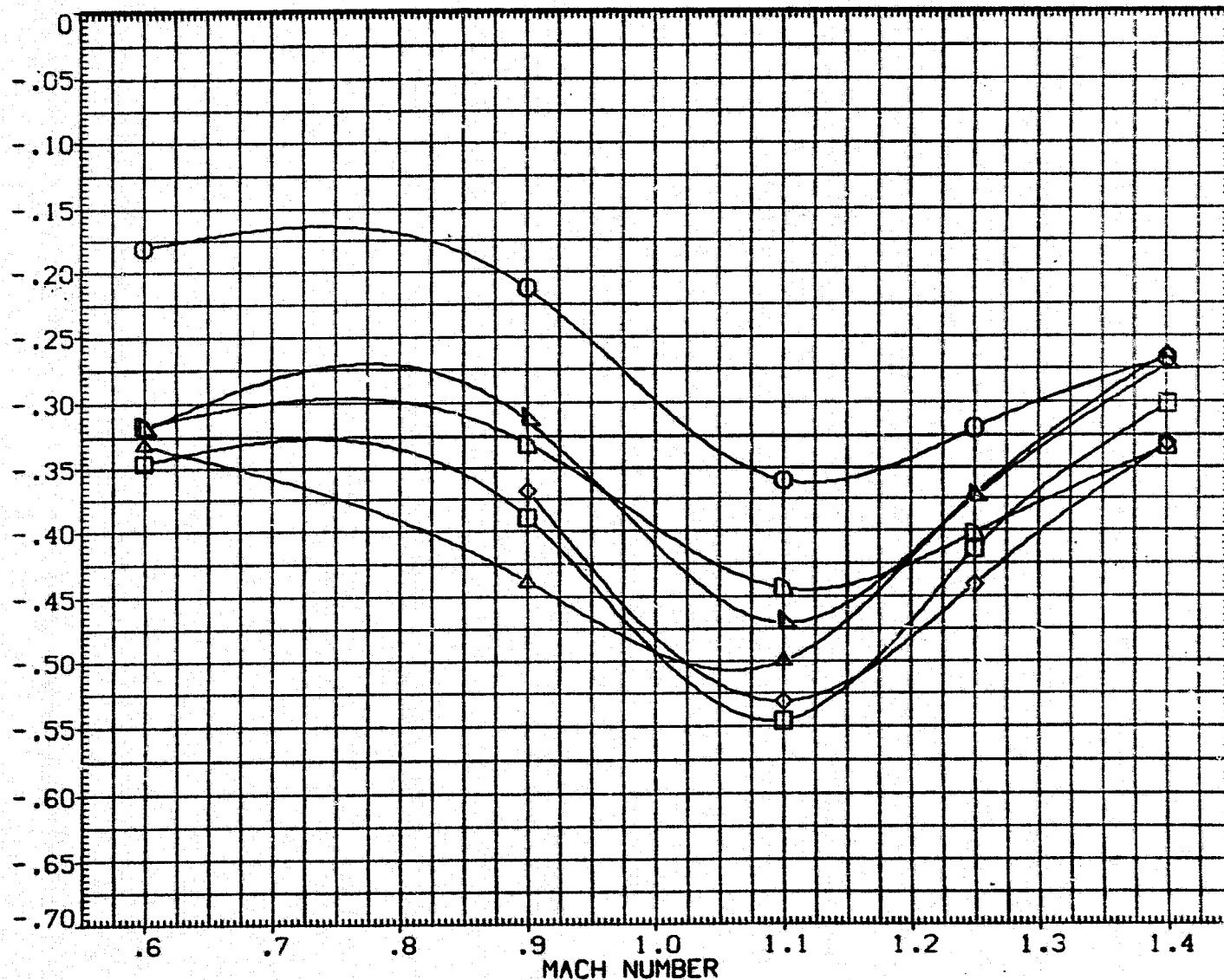


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION	
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(FE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(FE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 721) ORBITER BASE, CP721

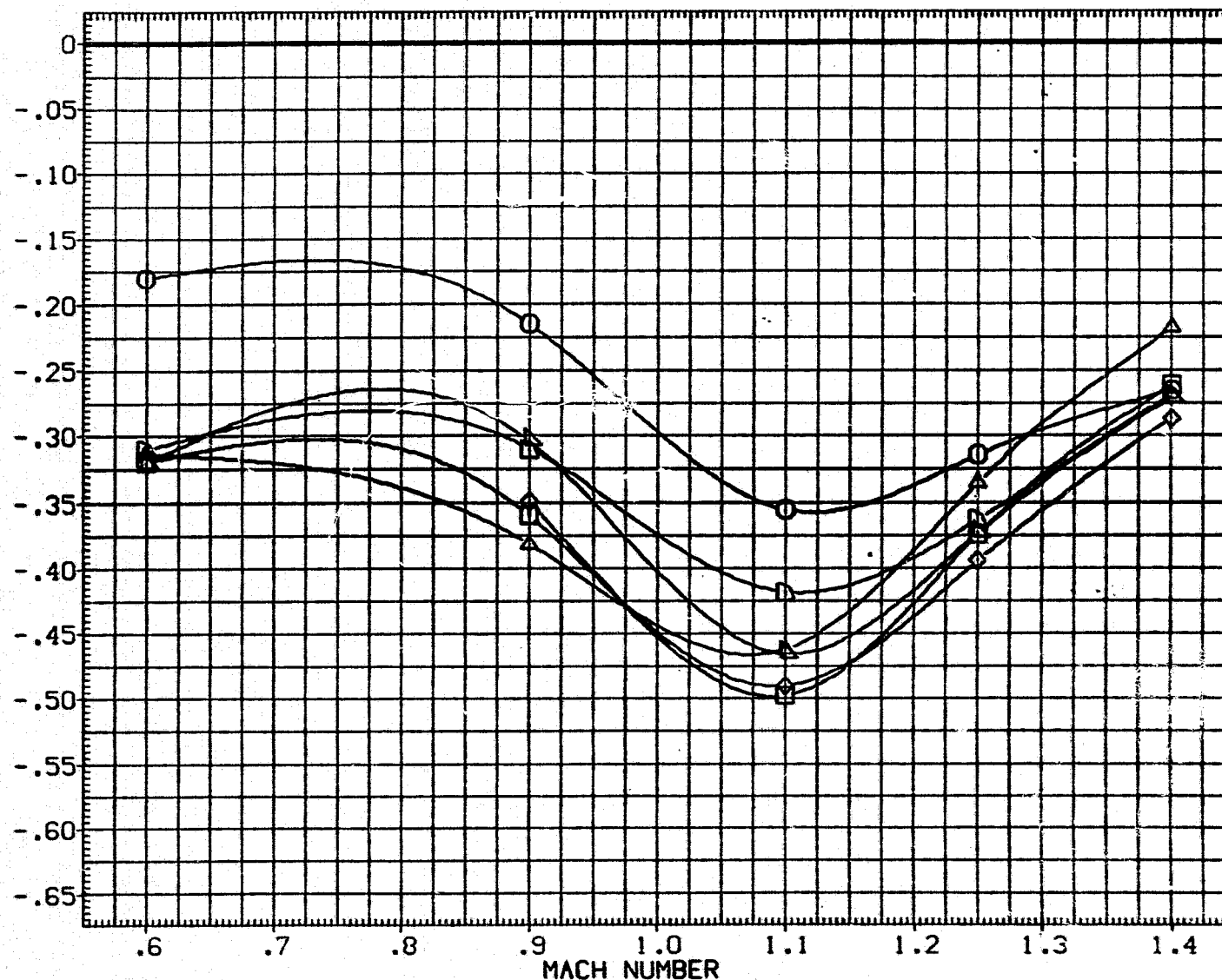


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	ALPHA	REFERENCE INFORMATION	
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	BREF	1290.3000 IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	XMRP	.0000 IN.
(FE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(FE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 372) ORBITER BASE, CP372

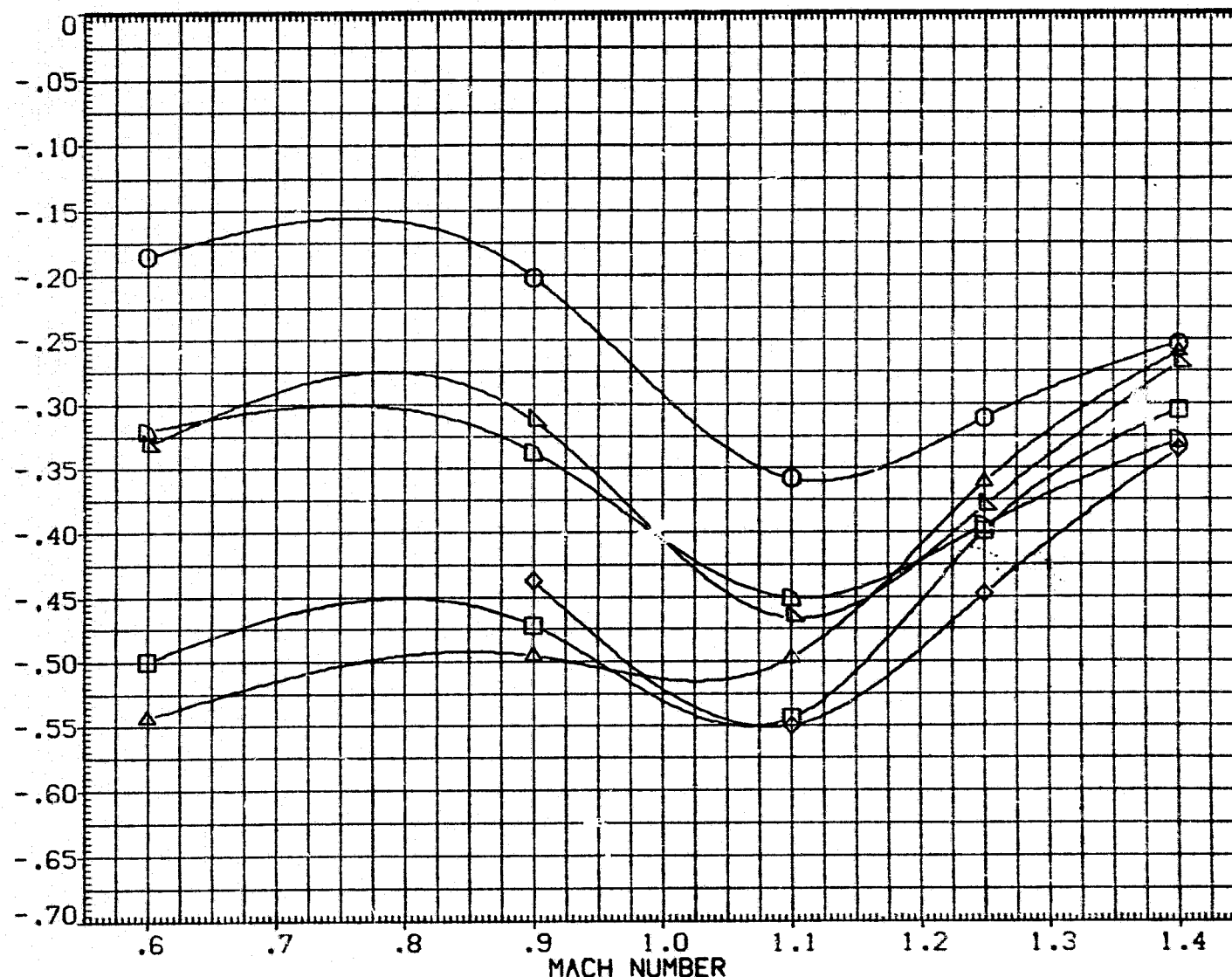


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION		
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	50.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(FE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(FE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 714) ORBITER BASE, CP714

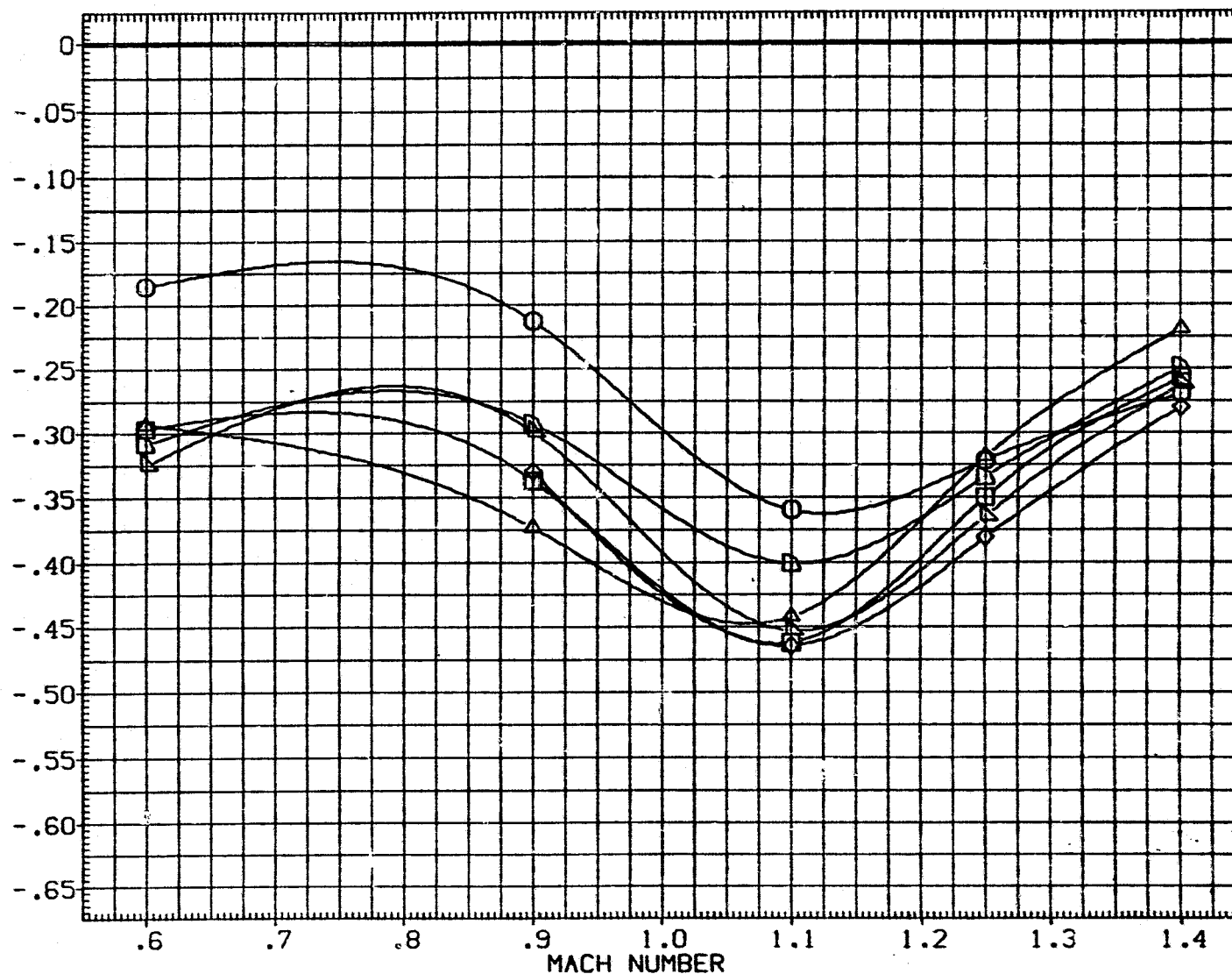


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	ALPHA	REFERENCE INFORMATION
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF 2690.0000 SQ.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF 1290.3000 IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF 1290.3000 IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP .0000 IN.
(FE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP .0000 IN.
(FE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP .0000 IN.
					SCALE .0200

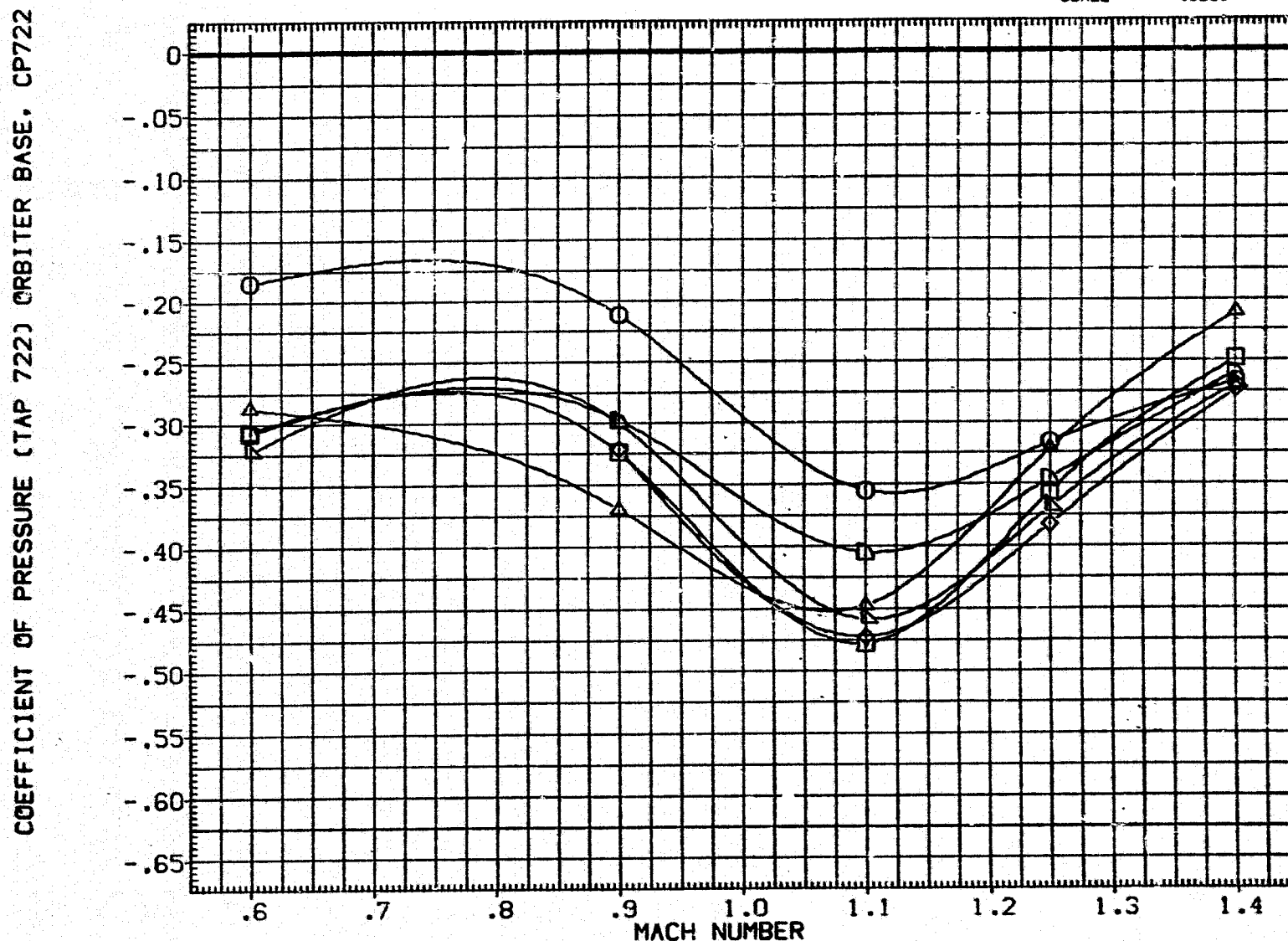


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	ALPHA	REFERENCE INFORMATION		
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	50.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(FE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(FE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

COEFFICIENT OF PRESSURE (TAP 373) ORBITER BASE, CP373

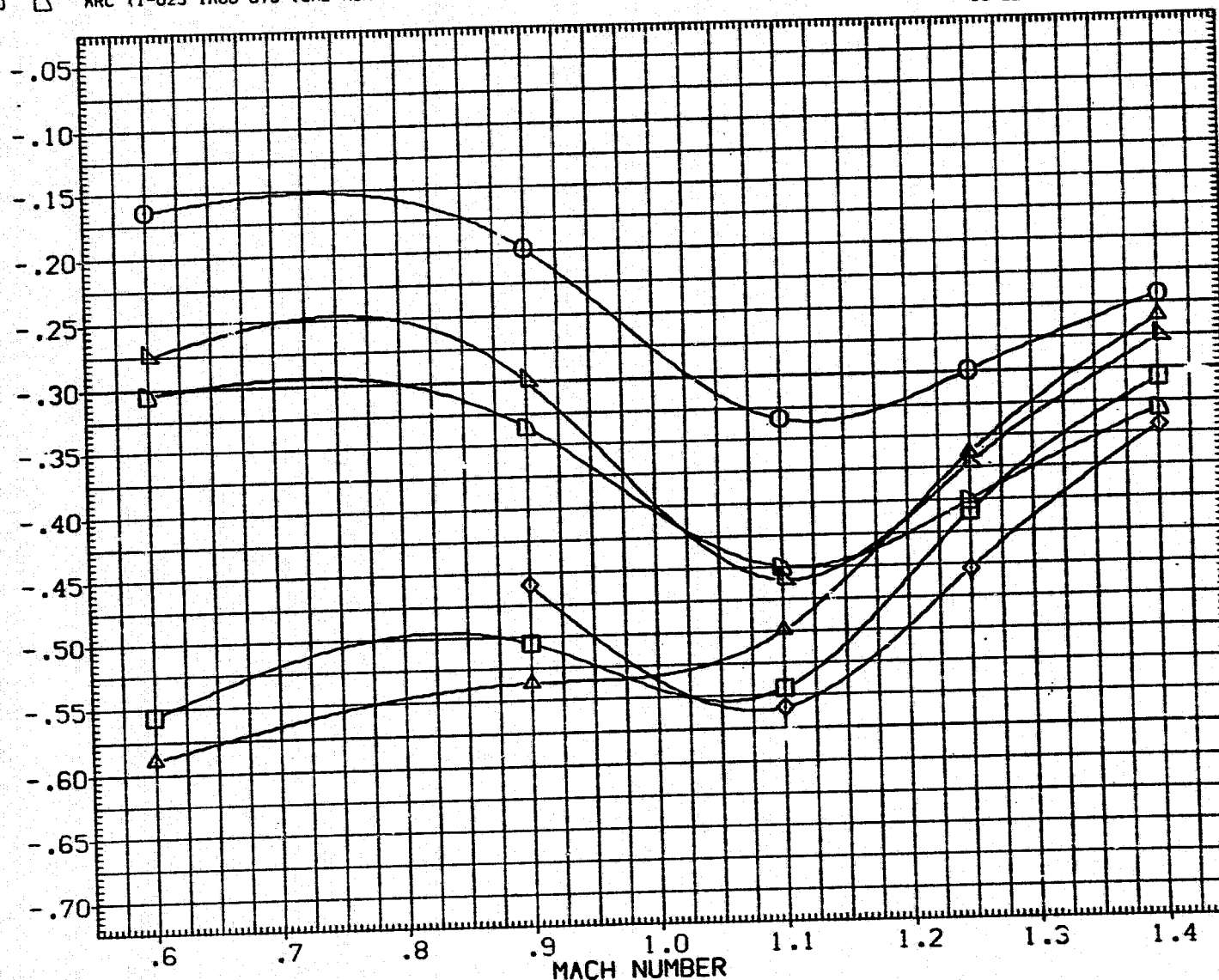


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-GB	ALPHA	REFERENCE INFORMATION	
(FE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(FE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(FE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(FE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(FE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(FE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 713) ORBITER BASE, CP713

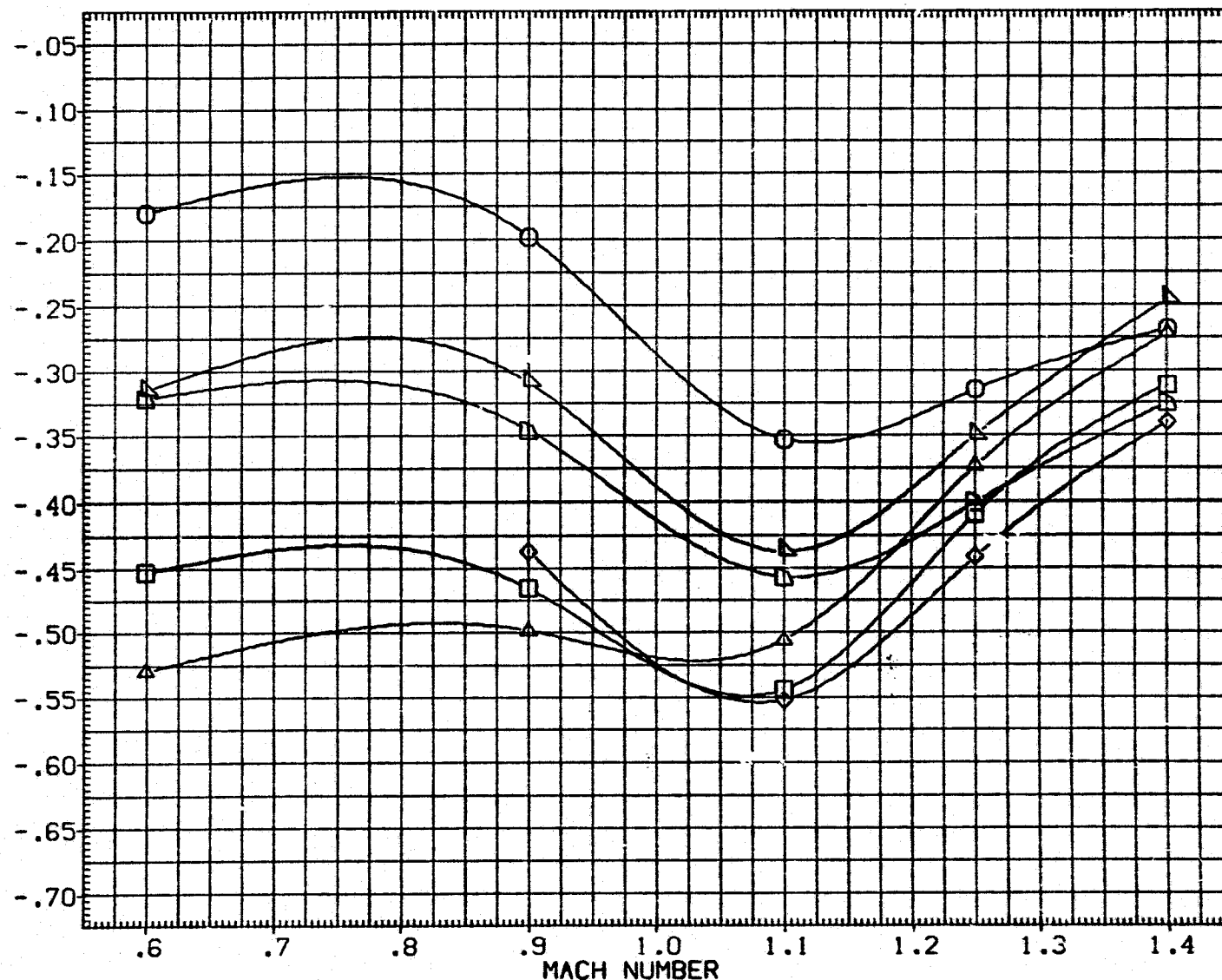


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	ALPHA	REFERENCE INFORMATION	
(GE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(GE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(GE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(GE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(GE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(GE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 723) ORBITER BASE. CP723

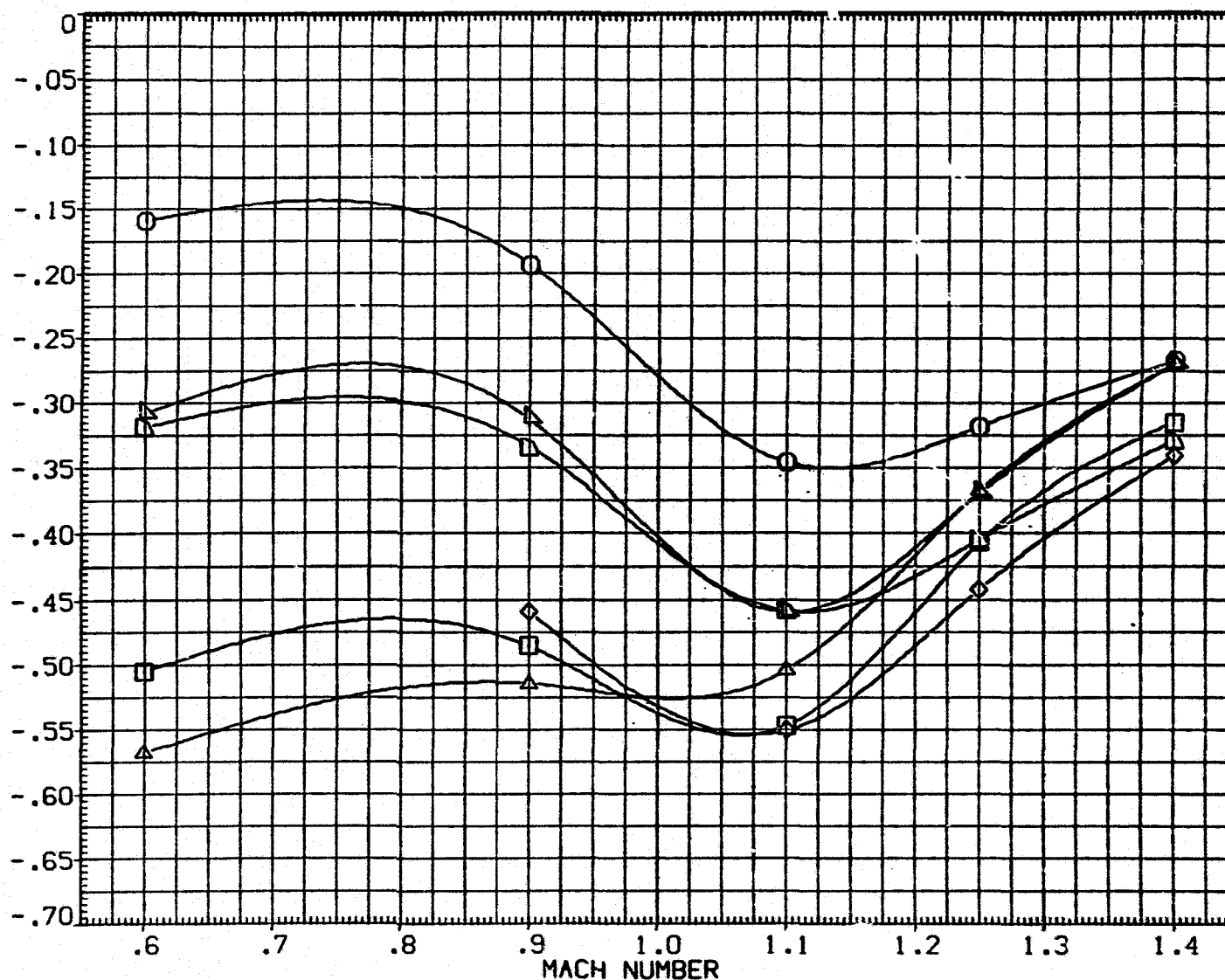


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-08	ALPHA	REFERENCE INFORMATION		
(GE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000	50.FT.
(GE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000	IN.
(GE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000	IN.
(GE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000	IN.
(GE4P80)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000	IN.
(GE4P85)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000	IN.
					SCALE	.0200	

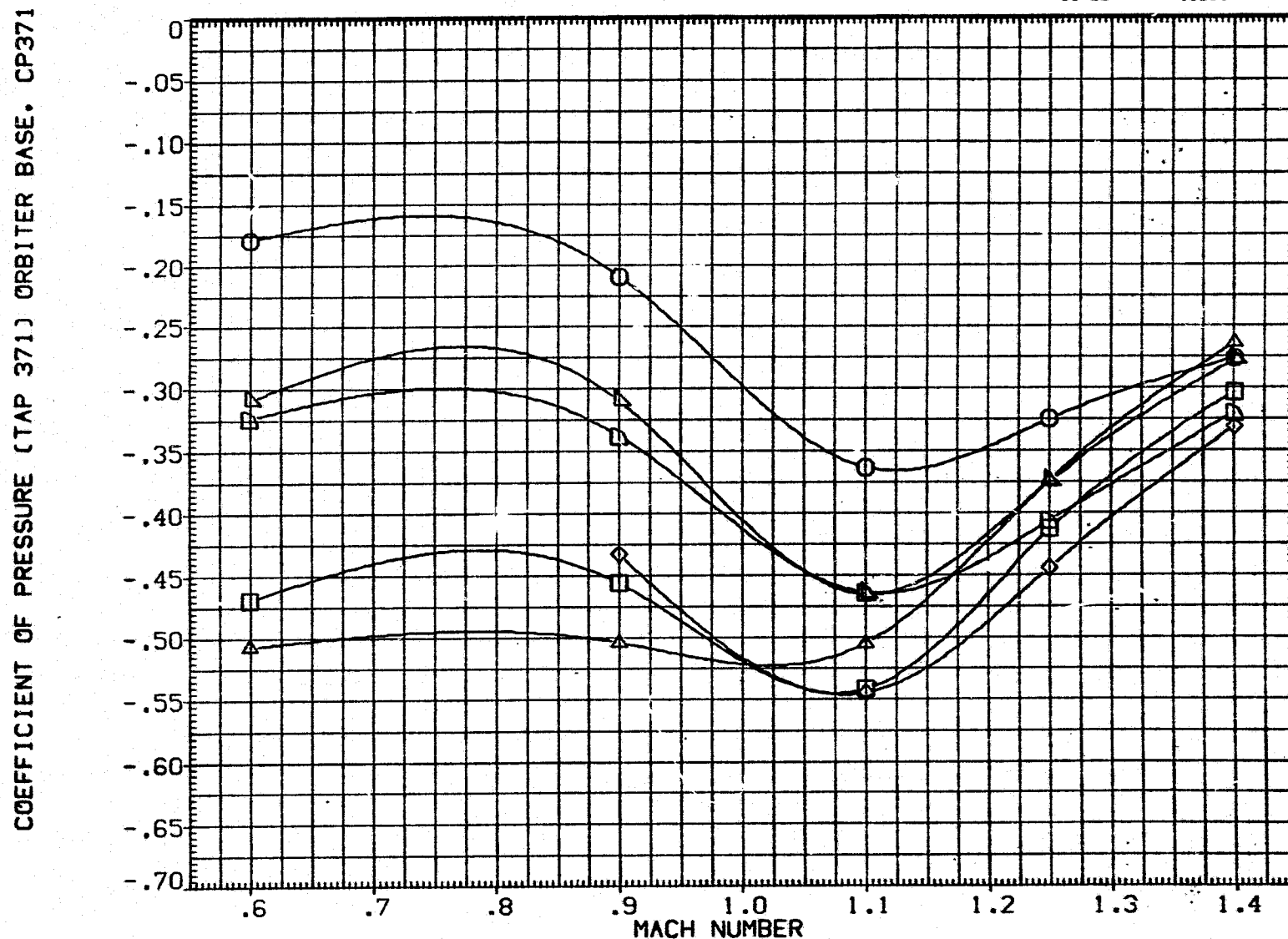


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0
(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION
(GE4P28)	ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF 2690.0000 SQ.FT.
(GE4P20)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF 1290.3000 IN.
(GE4P16)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF 1290.3000 IN.
(GE4P11)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP .0000 IN.
(GE4PB0)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP .0000 IN.
(GE4PB5)	ARC 11-023 1A80 OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP .0000 IN.
					SCALE .0200

COEFFICIENT OF PRESSURE (TAP 370) ORBITER BASE. CP370

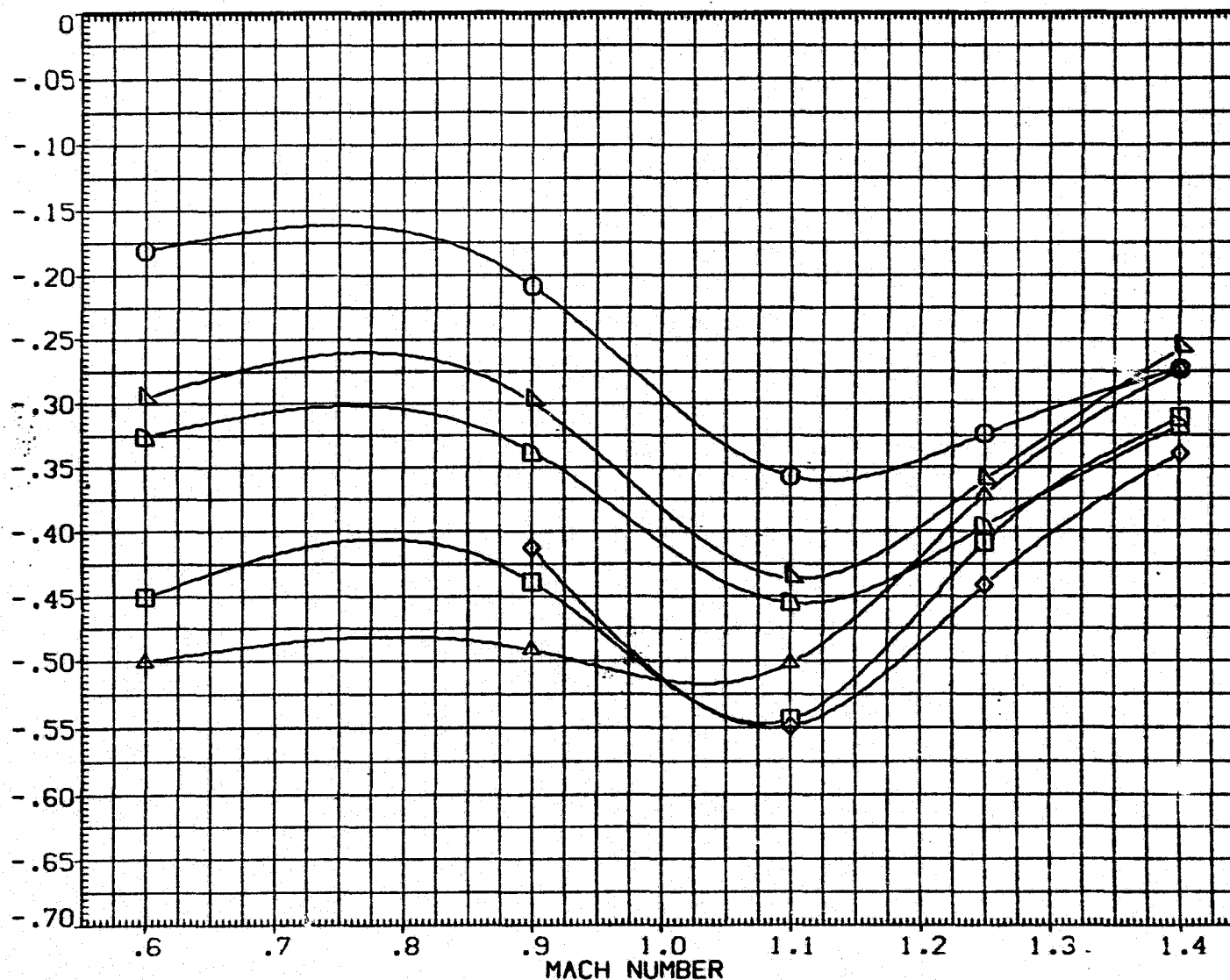


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	ALPHA	REFERENCE INFORMATION	
(GE4P28)	ARC 11-023 IABO OTS (SRB OFF) (SSME OFF)	.000	.000	4.000	SREF	2690.0000 SQ.FT.
(GE4P20)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM)	.000	.000	4.000	LREF	1290.3000 IN.
(GE4P16)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM-)	.000	.000	4.000	BREF	1290.3000 IN.
(GE4P11)	ARC 11-023 IABO OTS (SRB NOM) (SSME NOM+)	.000	.000	4.000	XMRP	.0000 IN.
(GE4P80)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 2 OUT)	.000	.000	4.000	YMRP	.0000 IN.
(GE4P85)	ARC 11-023 IABO OTS (SRB NOM) (SSME NO. 1 OUT)	.000	.000	4.000	ZMRP	.0000 IN.
					SCALE	.0200

COEFFICIENT OF PRESSURE (TAP 724) ORBITER BASE, CP724

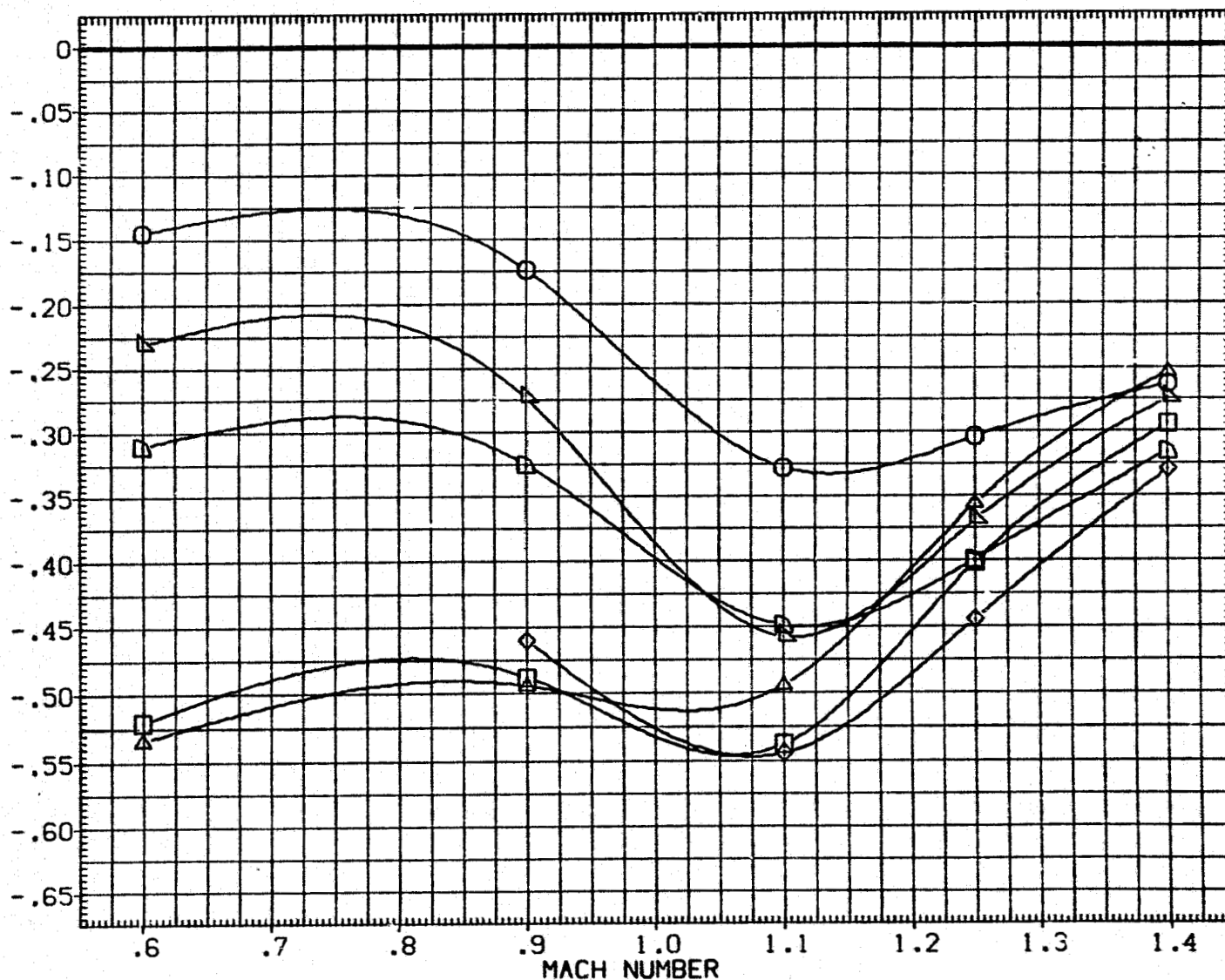


FIG. 126 EFFECT OF SSME PLUMES ON ORBITER BASE PRESSURE ALPHA=4.0

(A) BETA = .00

(BE4Z28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	DATASET	MACH
○	-4.000	.000	.000	.000	.000	3.400	BE4Z28	.600
□	.000	.000	.000	.000	.000	3.400	BE4Z30	1.100
◇	4.000	.000	.000	.000	.000	3.400	BE4Z32	1.400

REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

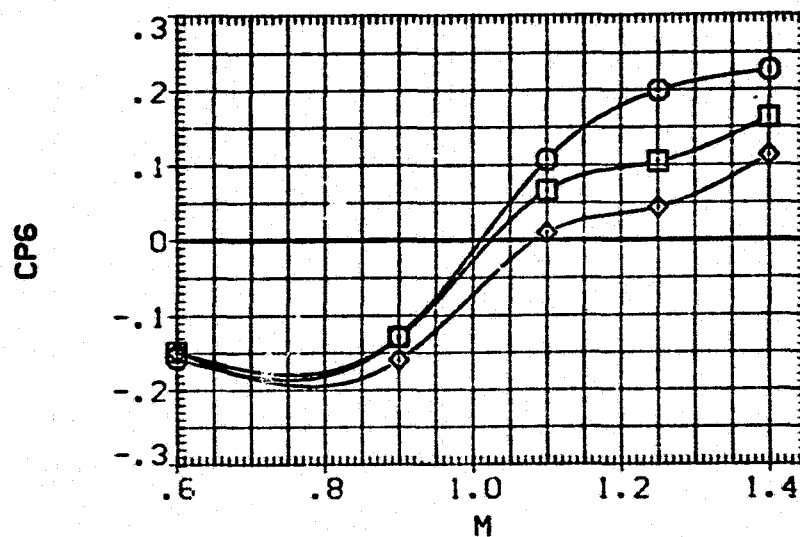
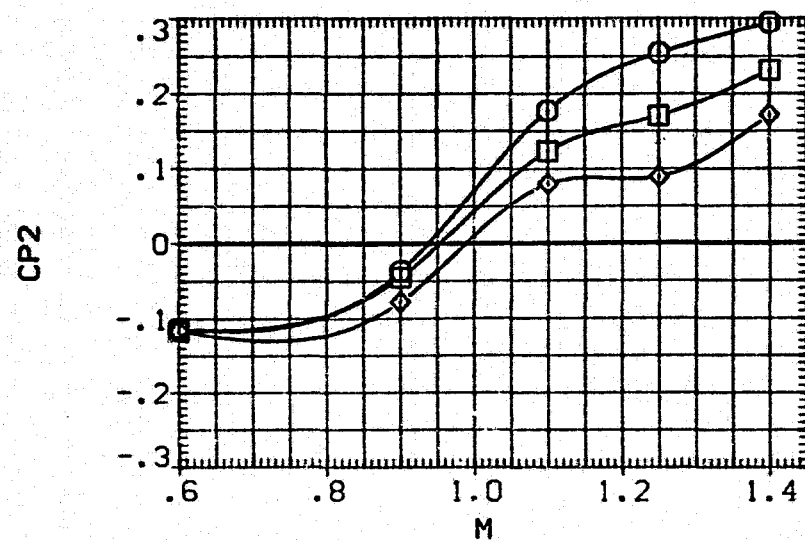
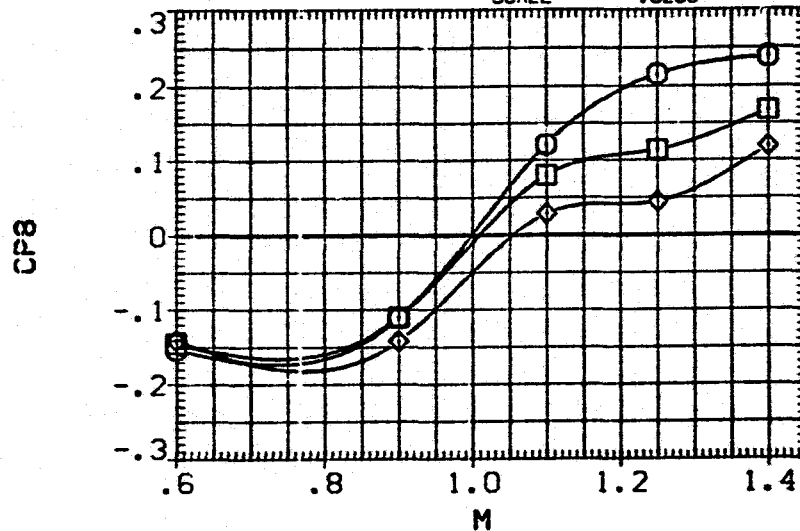
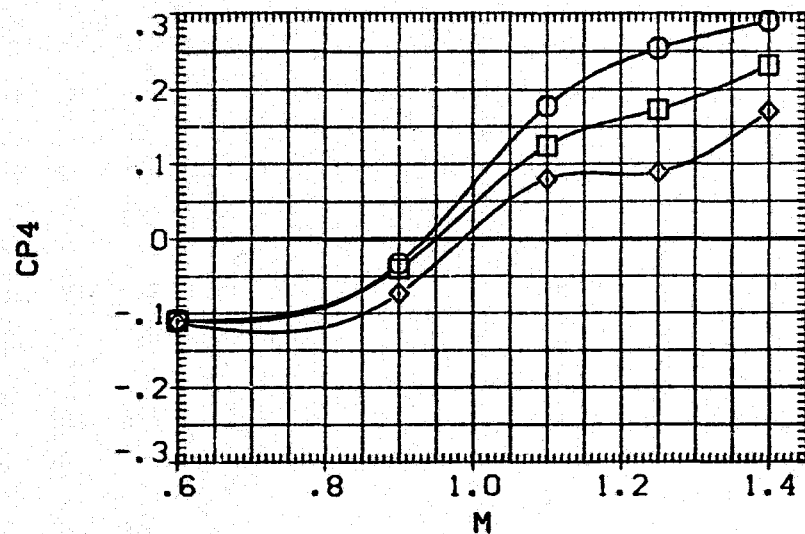


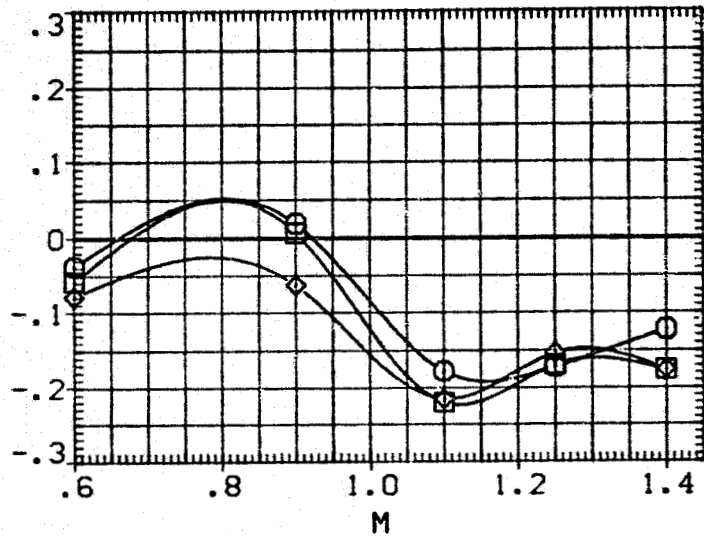
FIG. 127 ORB VENT PRESSURES

(BE4Z28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

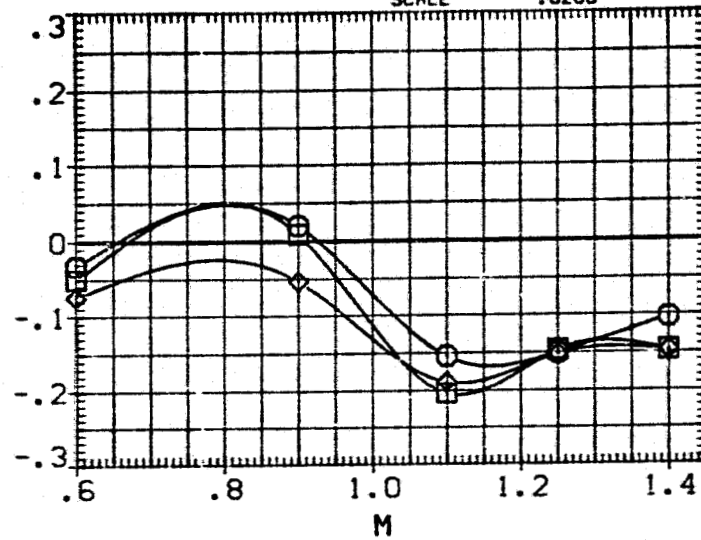
SYMBOL	ALPHA	BETA	PARAMETRIC VALUES		DATASET	MACH
□	-4.000		.000	ELV-18	BE4Z28	.600
◇	.000	ELV-08	.000	RN/L	BE4Z30	1.100
	4.000				BE4Z32	1.400

REFERENCE INFORMATION		
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

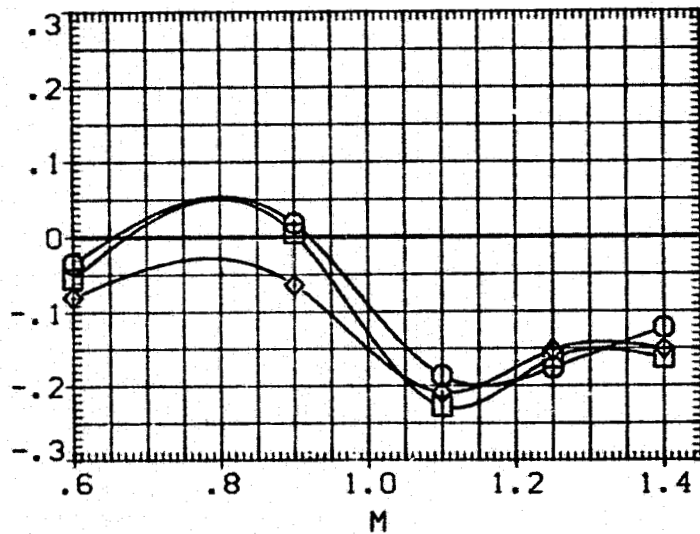
CP14



CP20



CP12



CP18

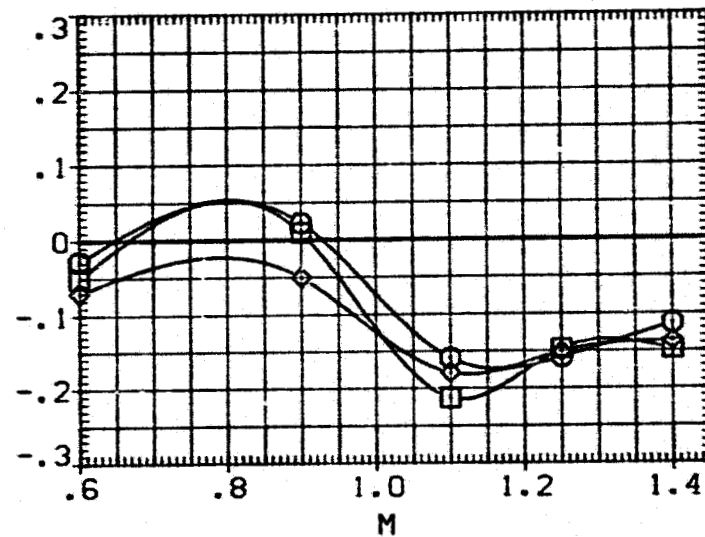


FIG. 127 ORB VENT PRESSURES

(BE4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-1B .000	BE4Y28	.600
□	.000	ELV-0B .000 RN/L 3.400	BE4Y30	1.100
○	4.000		BE4Y32	1.400

DATASET	MACH	REFERENCE INFORMATION
BE4Y29	.900	SREF 2690.0000 SQ.FT.
BE4Y31	1.250	LREF 1290.3000 IN.
		BREF 1290.3000 IN.
		XMRP .0000 IN.
		YMRP .0000 IN.
		ZMRP .0000 IN.
		SCALE .0200

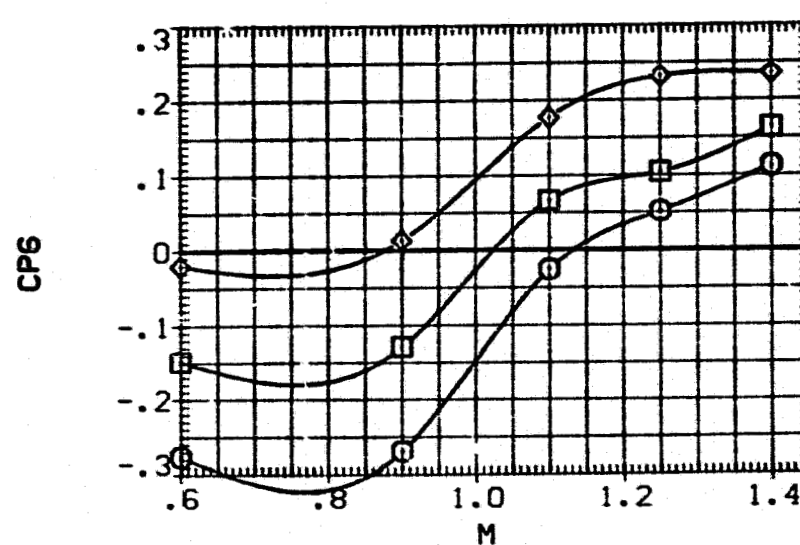
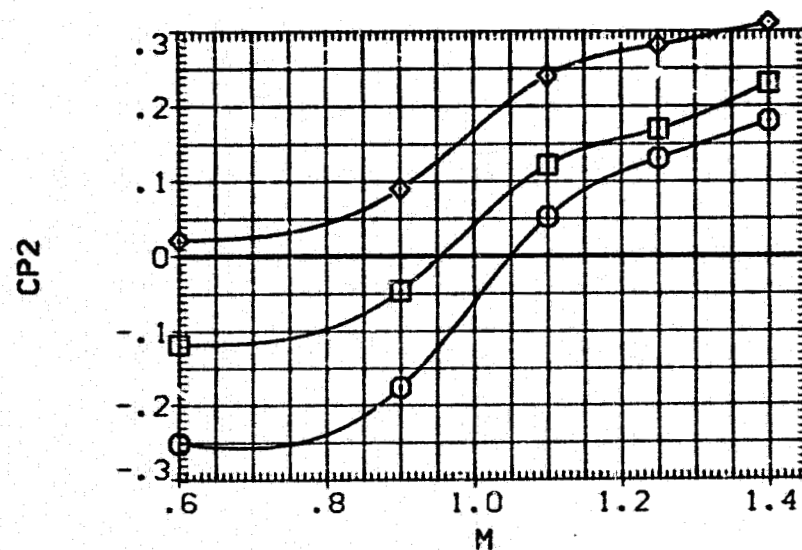
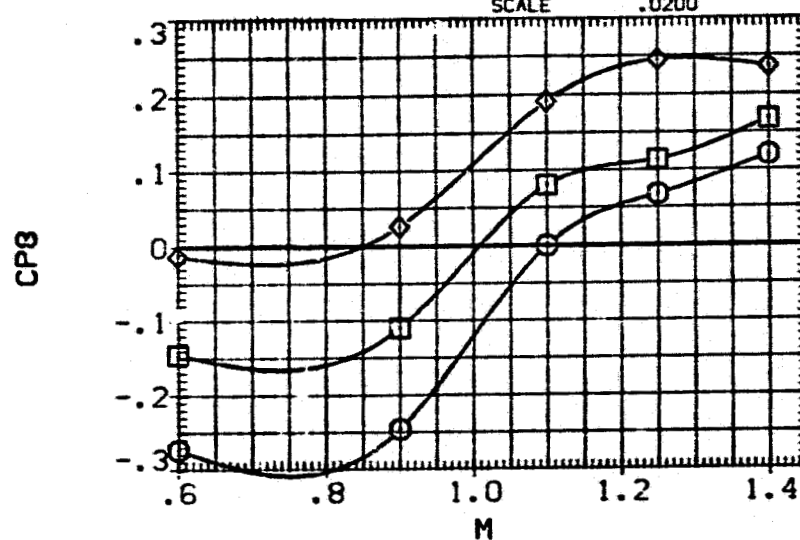
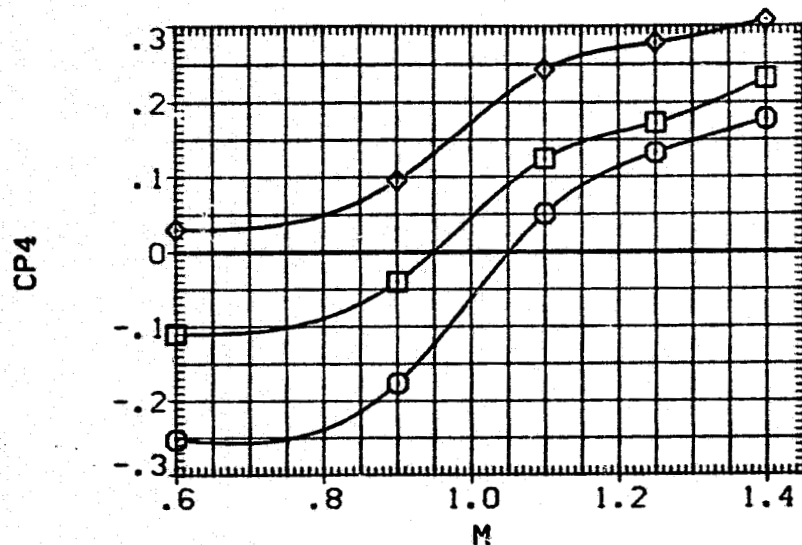


FIG. 127 ORB VENT PRESSURES

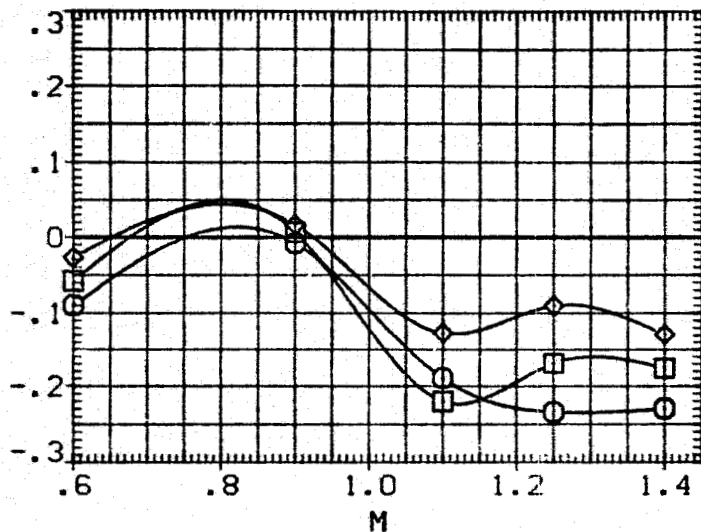
(BE4Y28) ARC 11-023 IA80 QTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000	BE4Y28	.600
□	.000	ELV-08 .000	BE4Y30	1.100
○	4.000	ELV-18 RN/L 3.400	BE4Y32	1.400

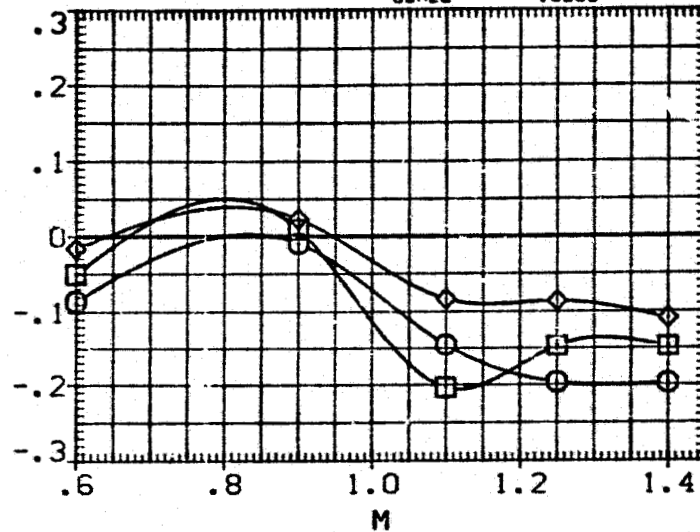
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

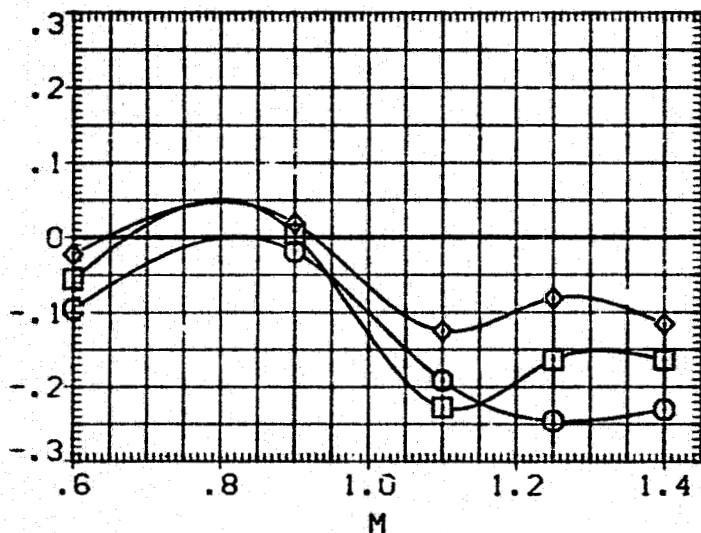
CP14



CP20



CP12



CP18

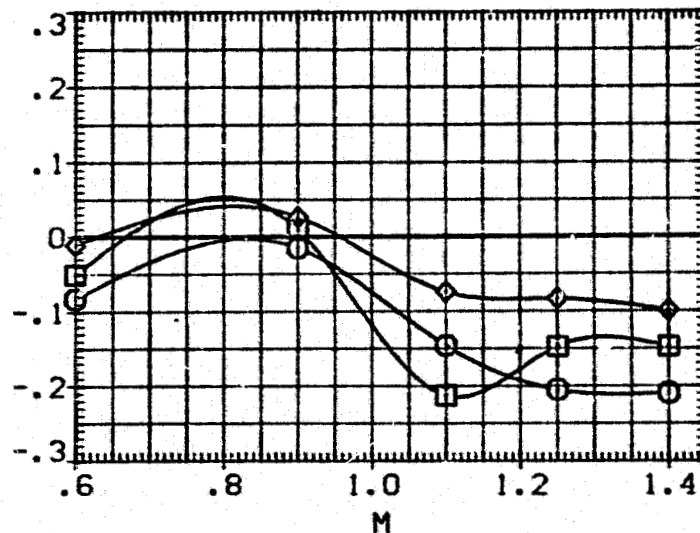


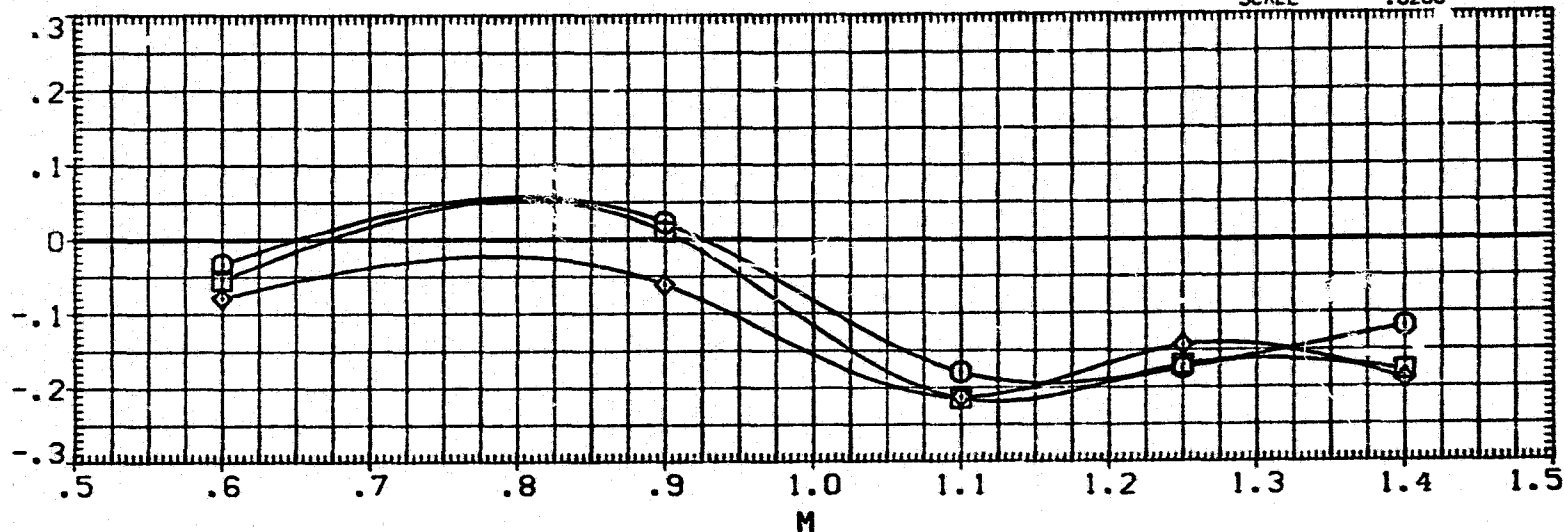
FIG. 127 ORB VENT PRESSURES

(IE4Z28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

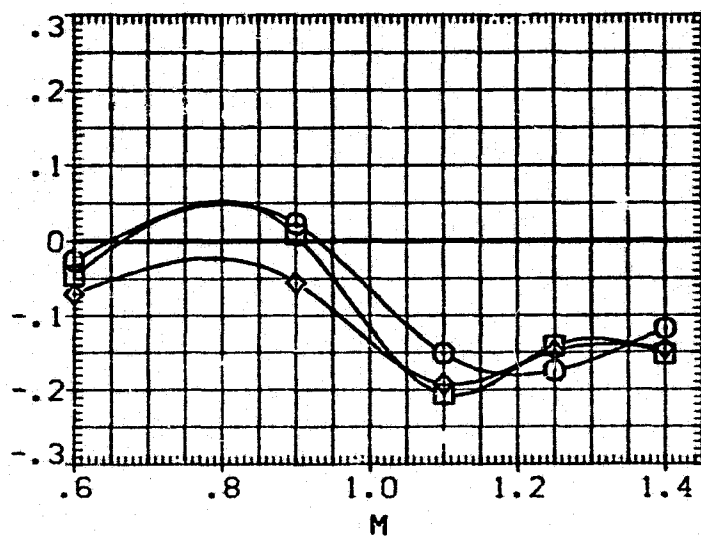
SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	DATASET	MACH	DATASET	MACH
◇	-4.000	.000	ELV-1B	IE4Z28	.600	IE4Z29	.900
◇	.000	.000	ELV-0B	IE4Z30	1.100	IE4Z31	1.250
◇	4.000	.000	RN/L	IE4Z32	1.400		

REFERENCE INFORMATION		
SREF	2690.0000	SO.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP13



CP17



CP19

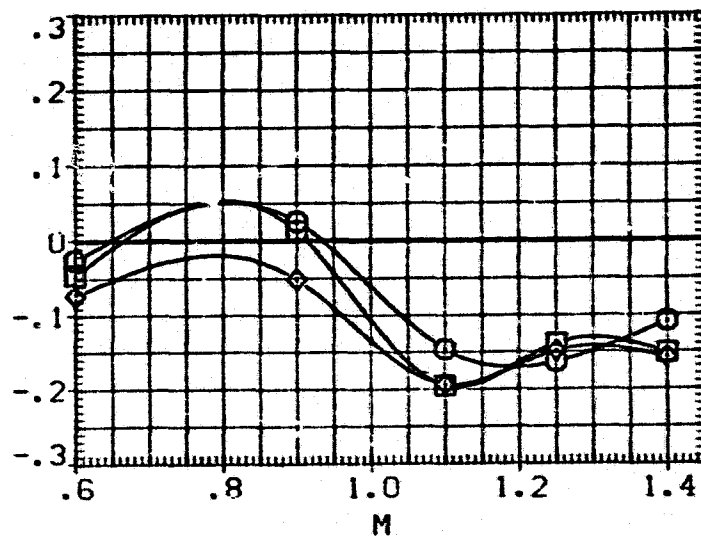


FIG. 127 ORB VENT PRESSURES

(IE4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA	IE4Y28	.800
□	.000	ELV-OB	IE4Y30	1.100
◇	4.000	.000 ELV-IB	IE4Y32	1.400
		.000 RN/L		

REFERENCE INFORMATION

SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

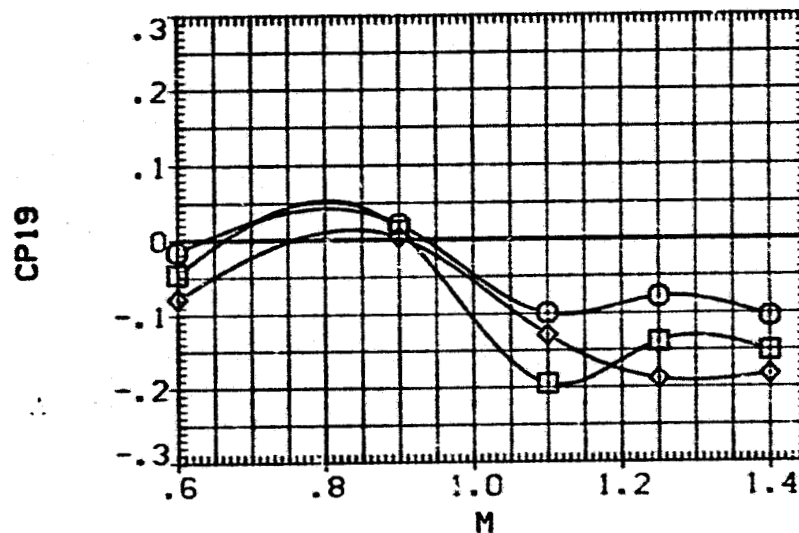
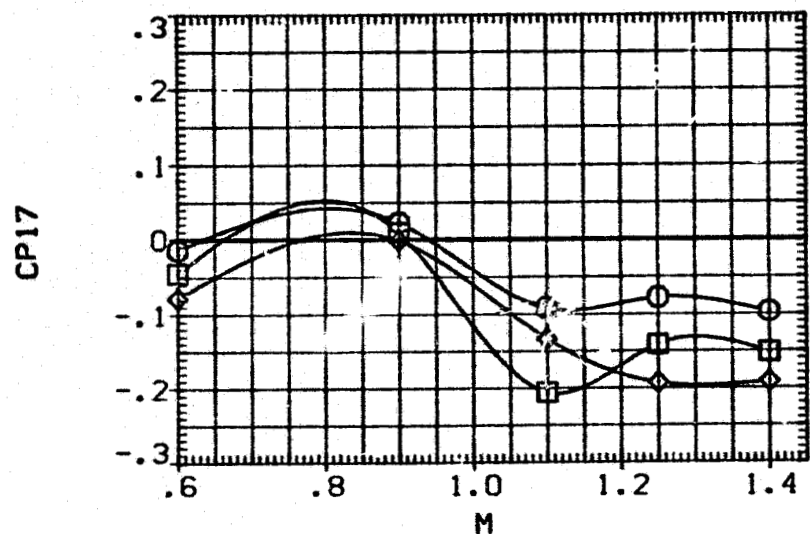
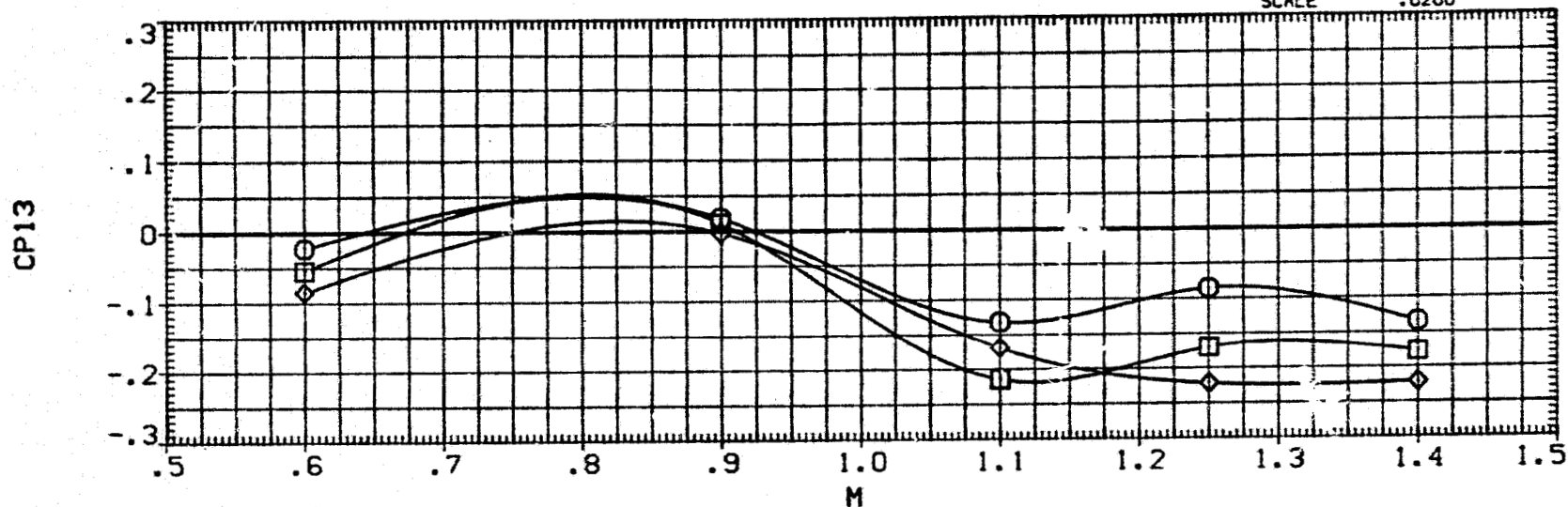


FIG. 127 ORB VENT PRESSURES

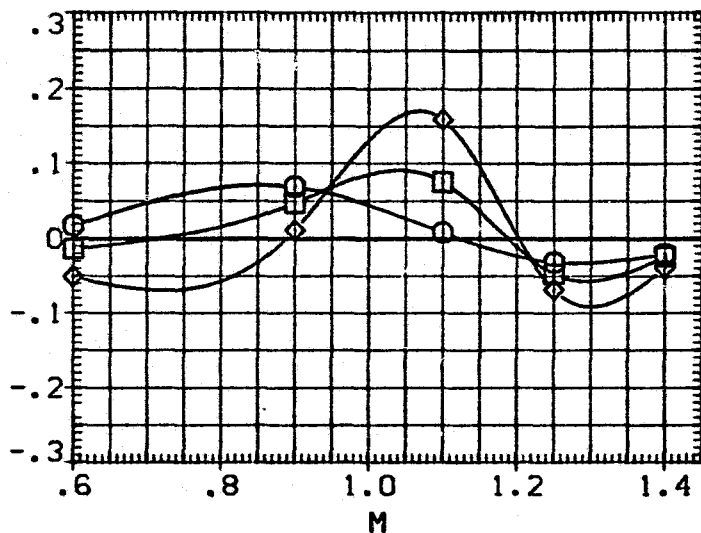
(CE4Z28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-IB	ELV-OB	RN/L	DATASET	MACH
◇	-4.000	.000	.000	.000	.000	.000	CE4Z28	.600
□	.000	.000	.000	.000	.000	3.400	CE4Z30	1.100
○	4.000	.000	.000	.000	.000	.000	CE4Z32	1.400

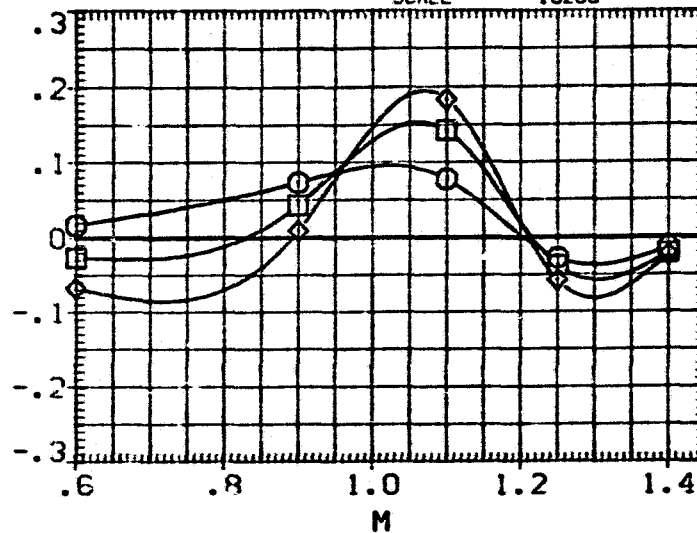
REFERENCE INFORMATION

REFERENCE INFORMATION	VALUE	UNIT
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

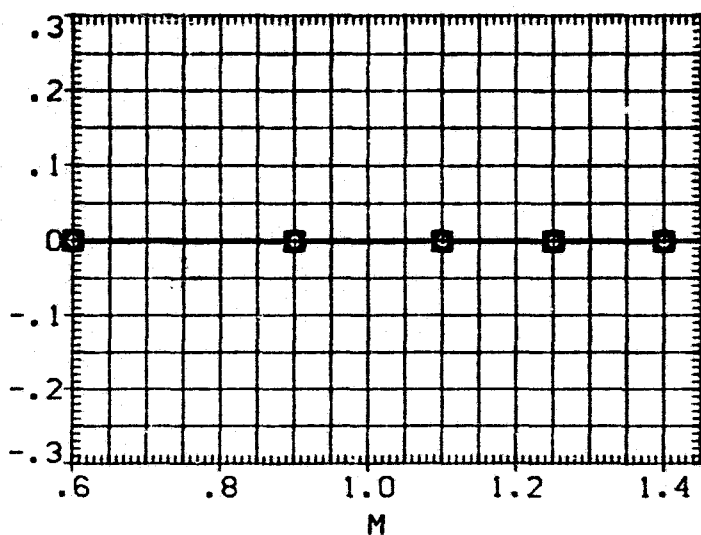
CP32



CP38



CP30



CP36

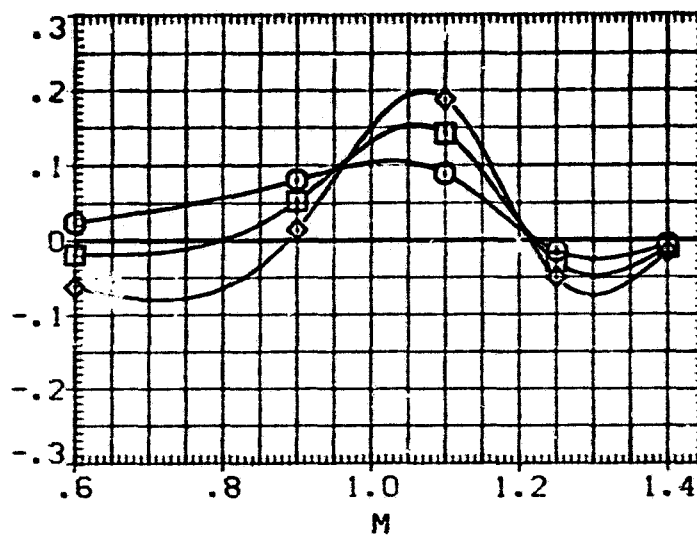


FIG. 127 ORB VENT PRESSURES

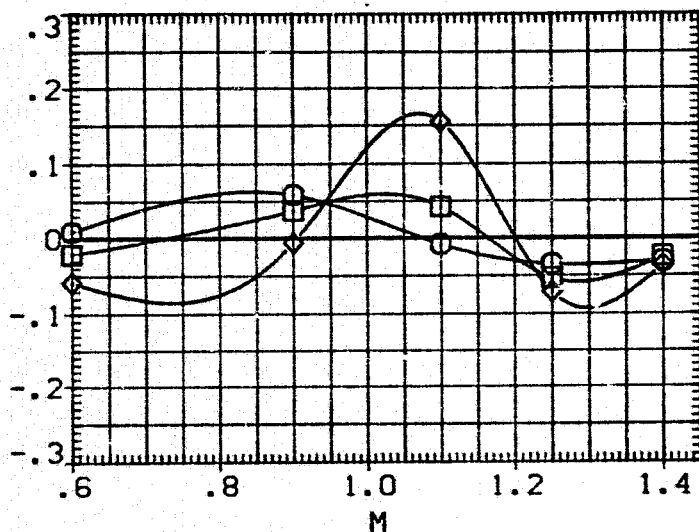
(CE4Z28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	DATASET	MACH
□	-4.000		.000 ELV-1B	CE4Z28	.600
◇	.000	ELV-0B	.000 RN/L	CE4Z30	1.100
	4.000			CE4Z32	1.400

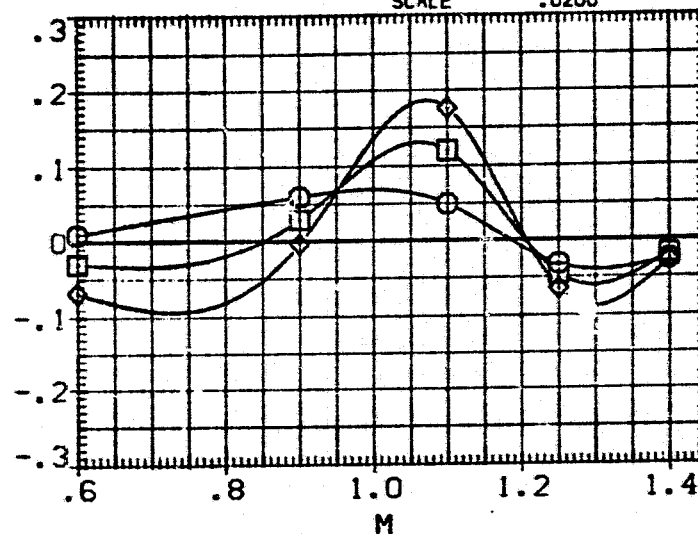
REFERENCE INFORMATION

DATASET	MACH	SREF	2690.0000	SQ.FT.
CE4Z29	.900	LREF	1290.3000	IN.
CE4Z31	1.250	BREF	1290.3000	IN.
		XMRP	.0000	IN.
		YMRP	.0000	IN.
		ZMRP	.0000	IN.
		SCALE	.0200	

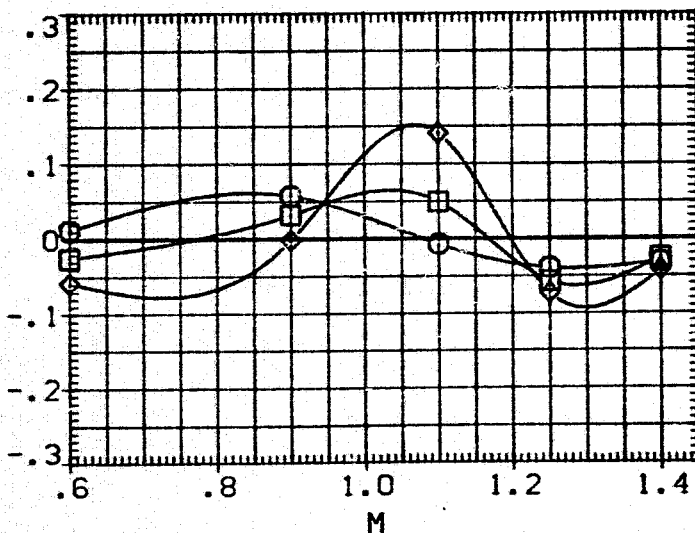
CP31



CP37



CP29



CP35

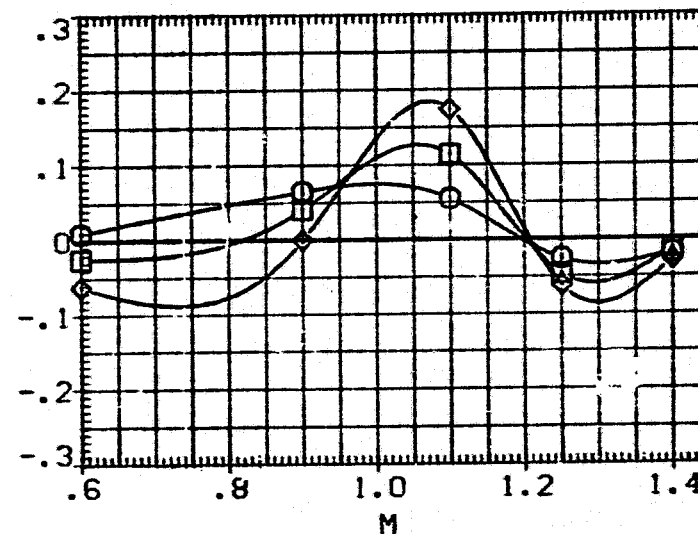


FIG. 127 ORB VENT PRESSURES

(CE4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
□	-4.000	ALPHA .000 ELV-1B .000	CE4Y28	.600
◇	.000	ELV-0B .000 RN/L 3.400	CE4Y30	1.100
◇	4.000		CE4Y32	1.400

DATASET	MACH	REFERENCE INFORMATION
CE4Y29	.900	SREF 2690.0000 SQ.FT.
CE4Y31	1.250	LREF 1290.3000 IN.
		BREF 1290.3000 IN.
		XMRP .0000 IN.
		YMRP .0000 IN.
		ZMRP .0000 IN.
		SCALE .0200

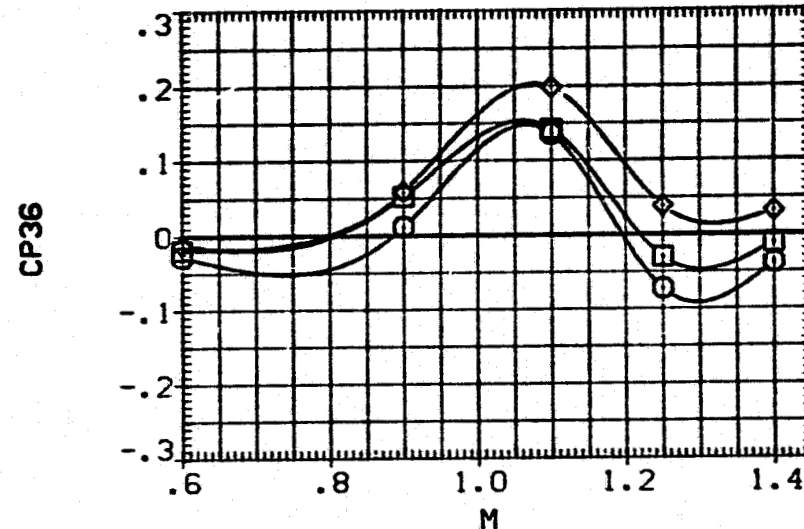
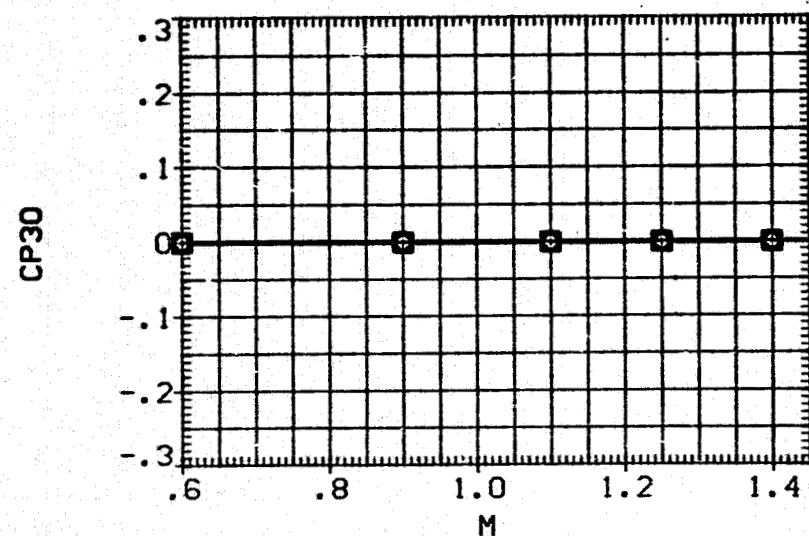
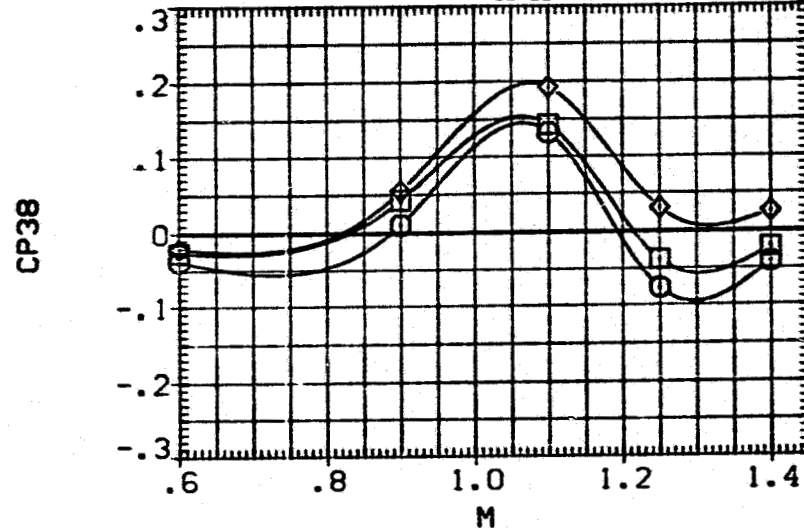
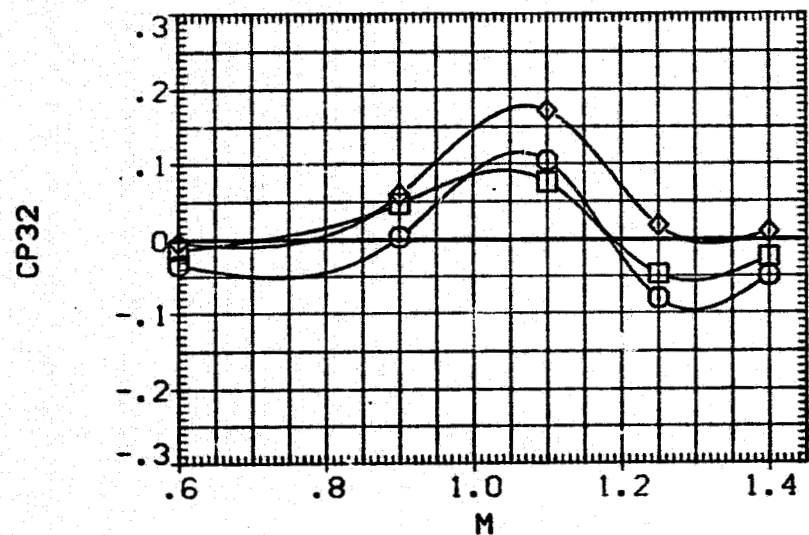


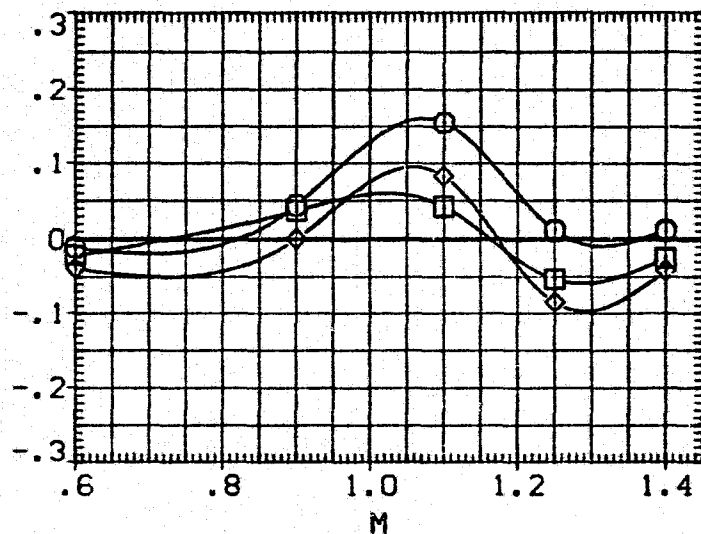
FIG. 127 ORB VENT PRESSURES

(CE4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

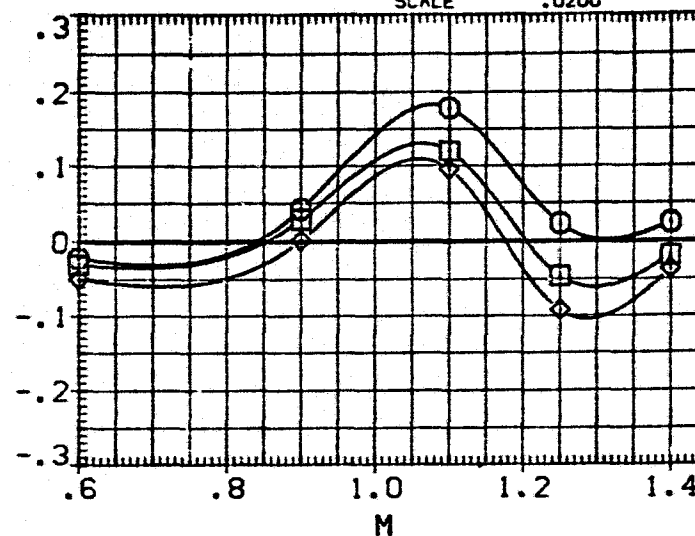
SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	CE4Y28	.600
□	.000	ELV-0B .000 RN/L 3.400	CE4Y30	1.100
◇	4.000		CE4Y32	1.400

DATASET	MACH	REFERENCE INFORMATION
CE4Y29	.900	SREF 2690.0000 SQ.FT.
CE4Y31	1.250	LREF 1290.3000 IN.
		BREF 1290.3000 IN.
		XMRP .0000 IN.
		YMRP .0000 IN.
		ZMRP .0000 IN.
		SCALE .0200

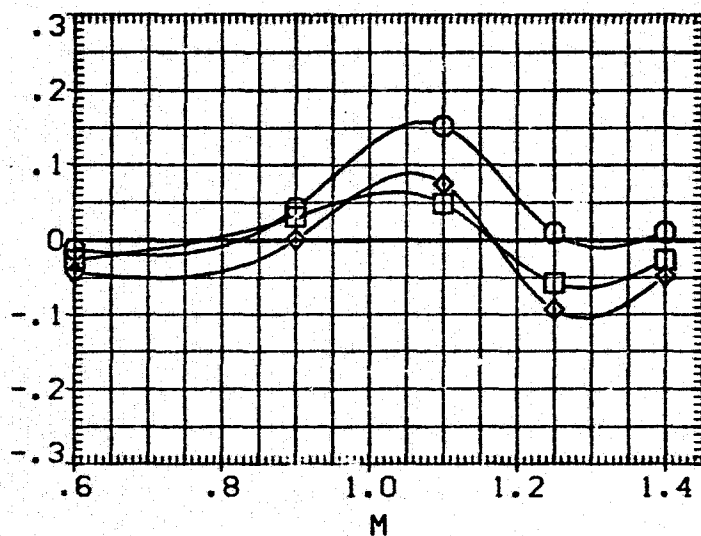
CP31



CP37



CP29



CP35

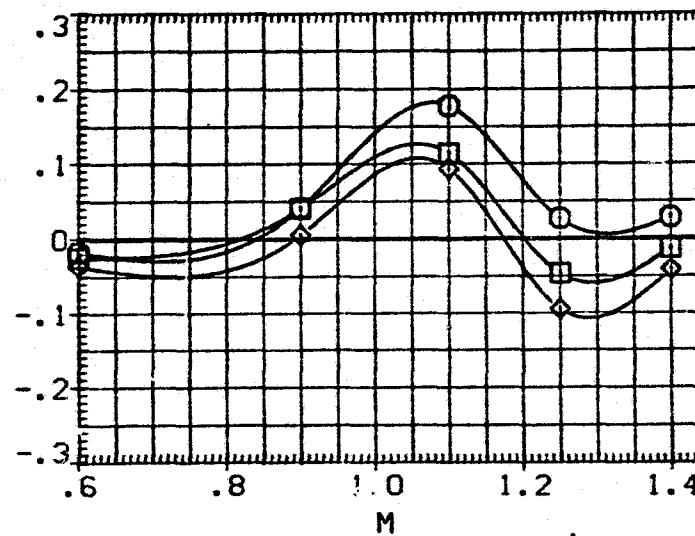


FIG. 127 ORB VENT PRESSURES

(HE4Z28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL



ALPHA

-4.000

.000

4.000

BETA

ELV-08

PARAMETRIC VALUES

.000

.000

ELV-18

RN/L

.000

3.400

DATASET

HE4Z28

HE4Z30

HE4Z32

MACH

.600

1.100

1.400

DATASET

HE4Z29

HE4Z31

MACH

.900

1.250

REFERENCE INFORMATION

SREF 2690.0000

LREF 1290.3000

BREF 1290.3000

XMRP .0000

YMRP .0000

ZMRP .0000

SCALE .0200

SO.FT.

IN.

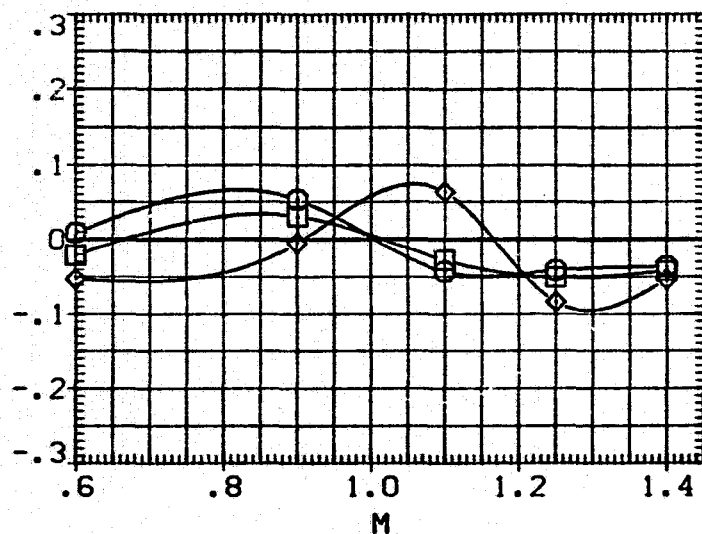
IN.

IN.

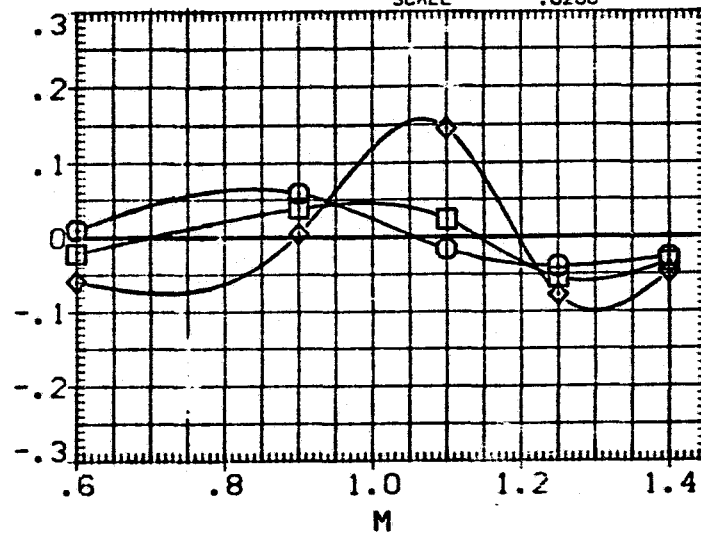
IN.

IN.

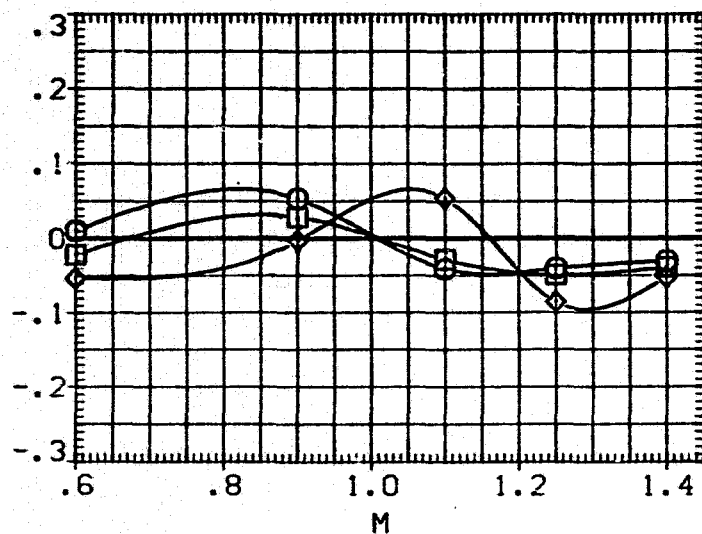
CP24



CP28



CP22



CP26

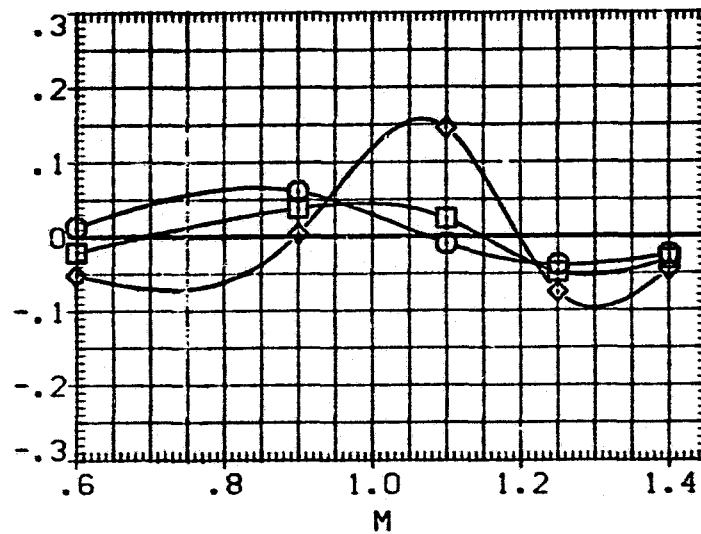


FIG. 127 ORB VENT PRESSURES

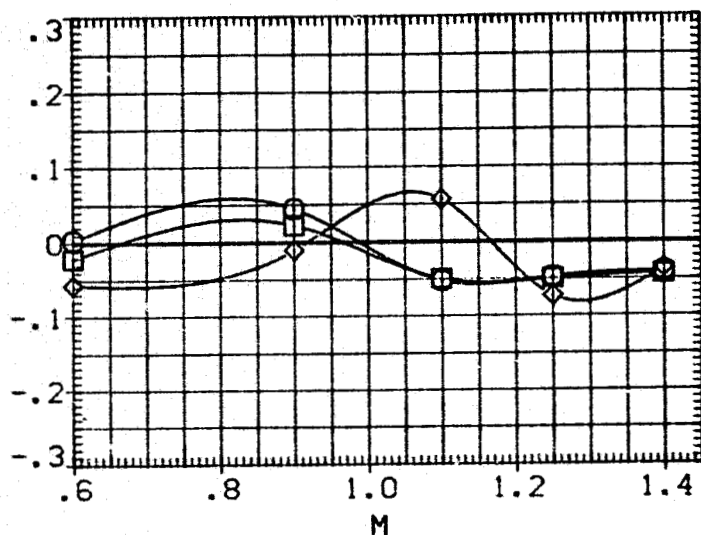
(HE4Z28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	ELV-OB	PARAMETRIC VALUES	ELV-1B	RN/L	HE4Z28	HE4Z30	HE4Z32	MACH
◇	-4.000			.000			.600			.900
□	.000			.000			1.100			1.250
○	4.000			.000			1.400			

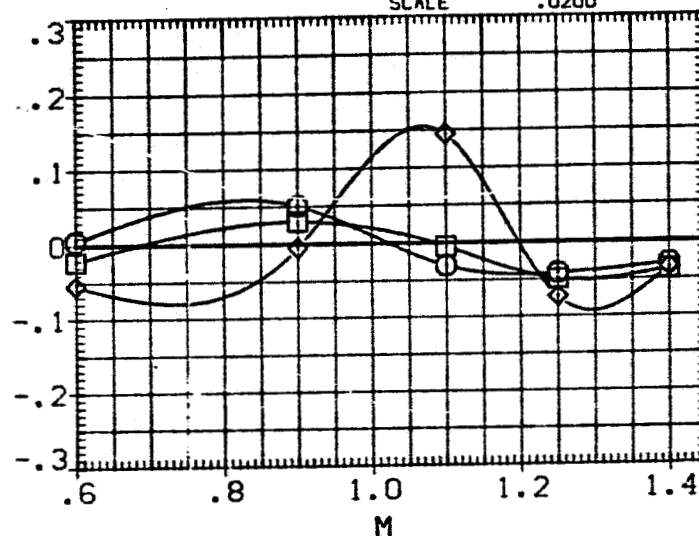
REFERENCE INFORMATION

SYMBOL	ALPHA	BETA	ELV-OB	PARAMETRIC VALUES	ELV-1B	RN/L	HE4Z28	HE4Z30	HE4Z32	MACH
◇	-4.000			.000			.600			.900
□	.000			.000			1.100			1.250
○	4.000			.000			1.400			

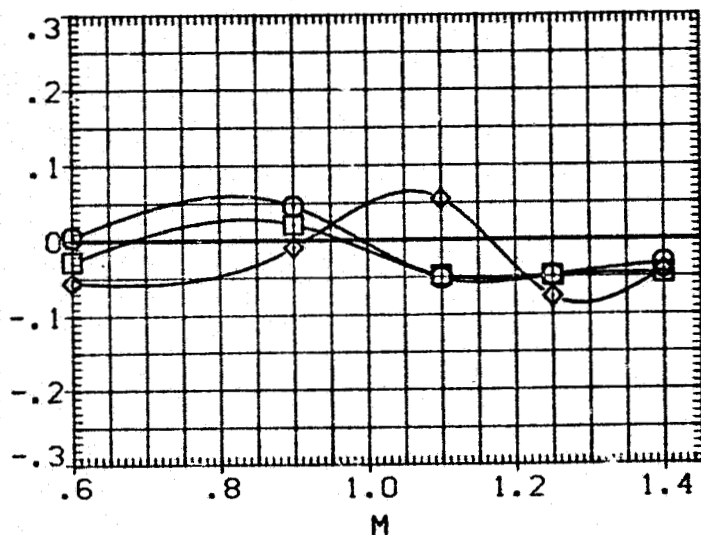
CP23



CP27



CP21



CP25

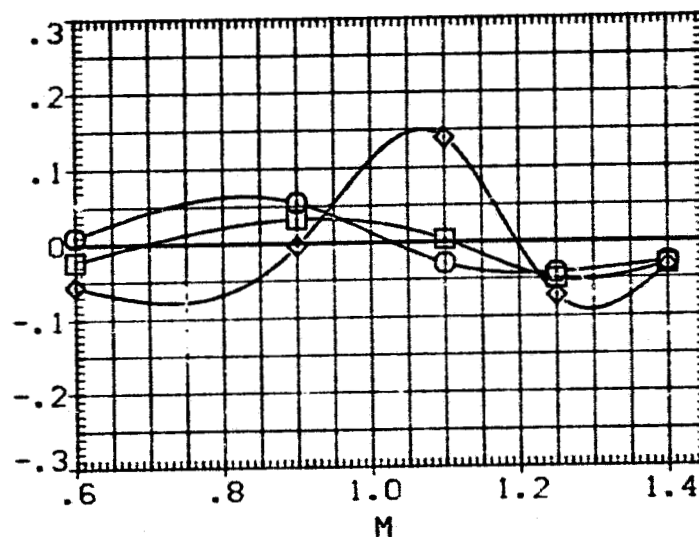


FIG. 127 ORB VENT PRESSURES

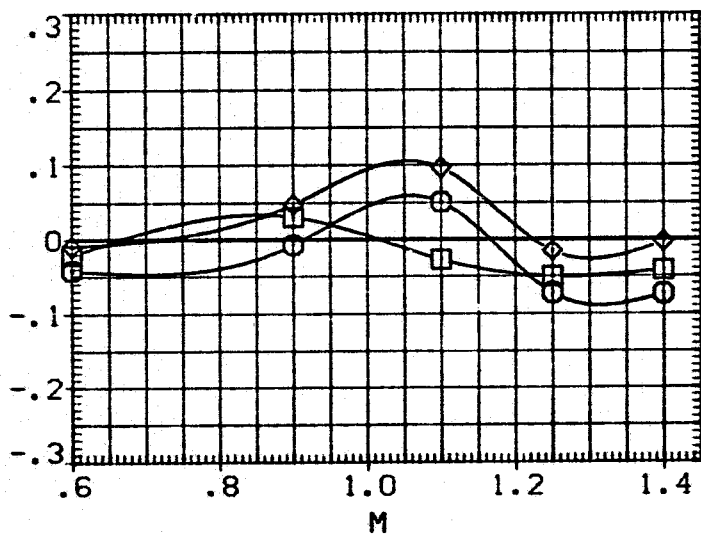
(HE4Y28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
□	-4.000	ALPHA .000 ELV-1B .000	HE4Y28	.600
◇	.000	ELV-0B .000 RN/L 3.400	HE4Y30	1.100
◇	4.000		HE4Y32	1.400

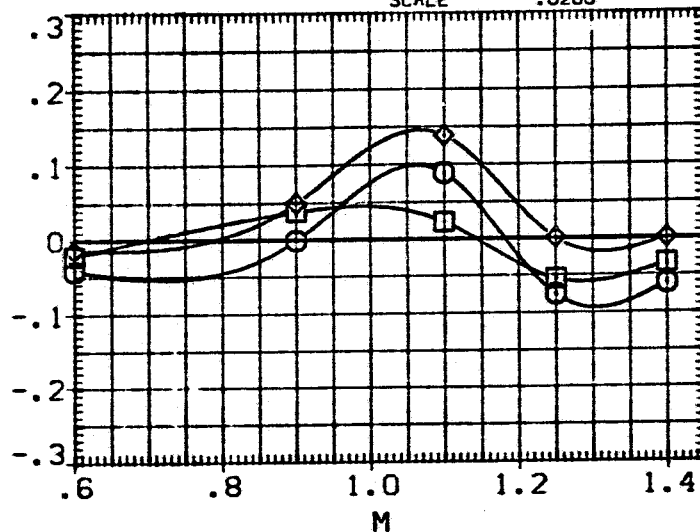
REFERENCE INFORMATION

DATASET	MACH	SREF	2690.0000	SQ.FT.
HE4Y29	.900	LREF	1290.3000	IN.
HE4Y31	1.250	BREF	1290.3000	IN.
		XMRP	.0000	IN.
		YMRP	.0000	IN.
		ZMRP	.0000	IN.
		SCALE	.0200	

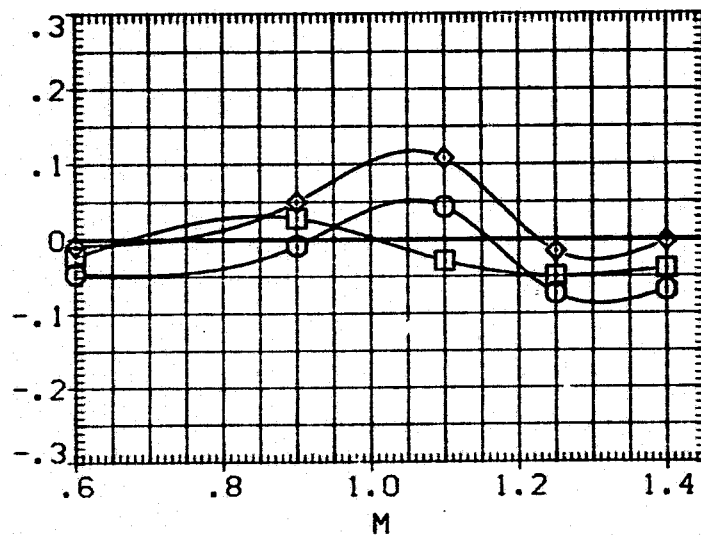
CP24



CP28



CP22



CP26

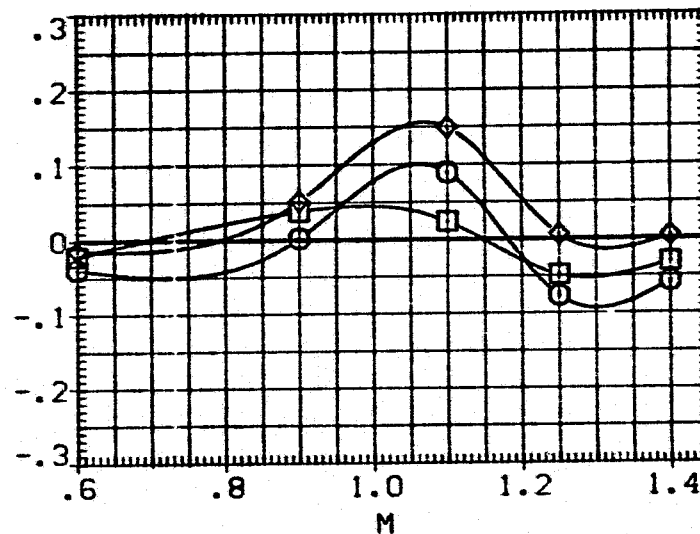


FIG. 127 ORB VENT PRESSURES

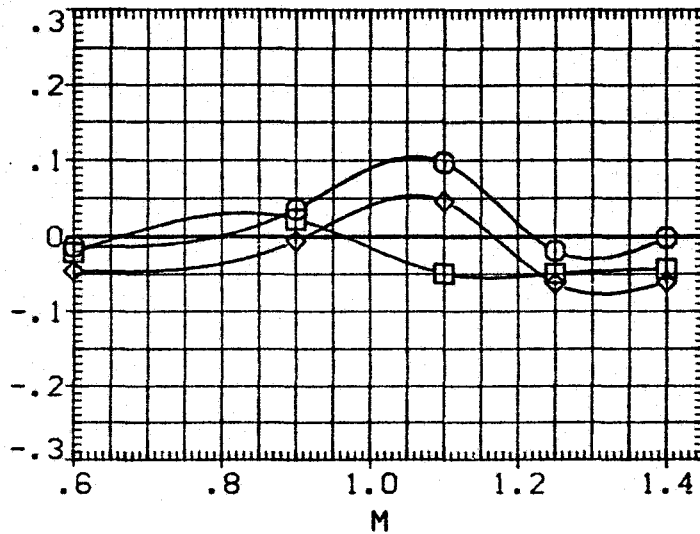
(HE4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA	HE4Y28	.600
□	.000	ELV-OB	HE4Y30	1.100
◇	4.000	ELV-1B RN/L	HE4Y32	1.400

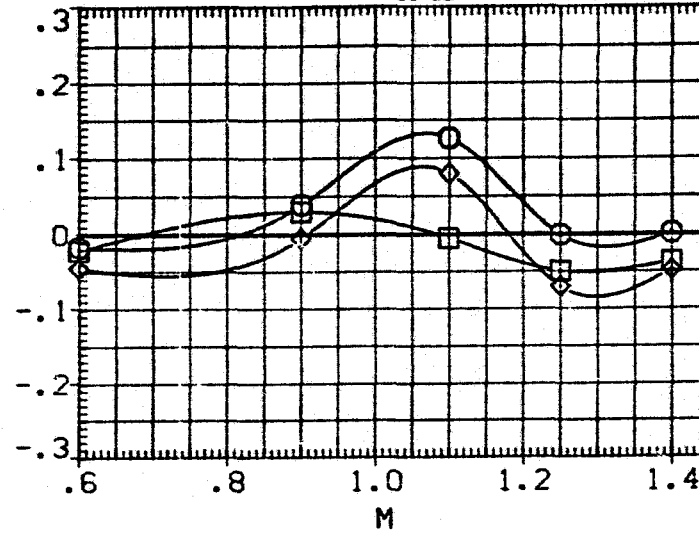
REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

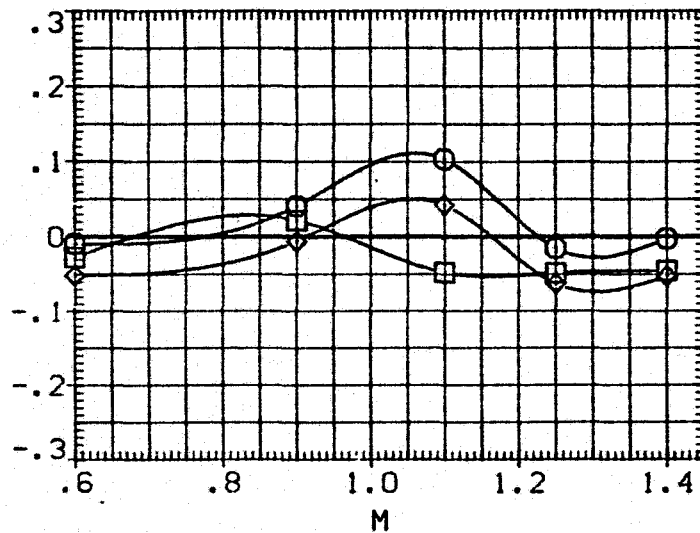
CP23



CP27



CP21



CP25

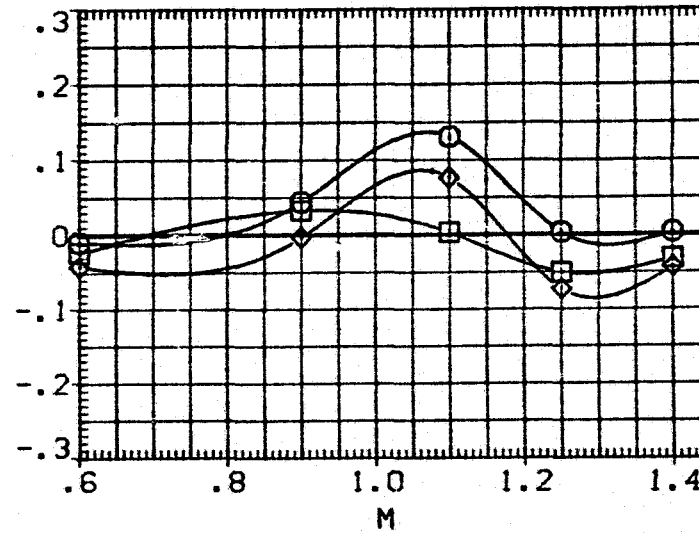


FIG. 127 ORB VENT PRESSURES

SYMBOL

ALPHA

PARAMETRIC VALUES

DATASET

MACH

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

SREF	2850.0000	50.
LREF	1290.3000	IN.

ERET	1290.3000	IN.
BREF	1290.3000	IN.

ENET	1250.3800	IN.
XMRP	.0000	IN.

YMRP .0000 IN.

ZMRP	.0000	IN.
------	-------	-----

SCALE .0200

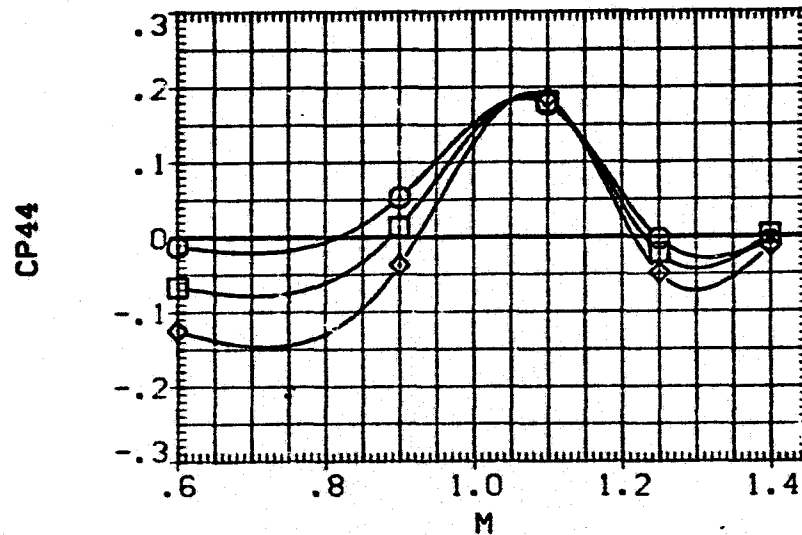
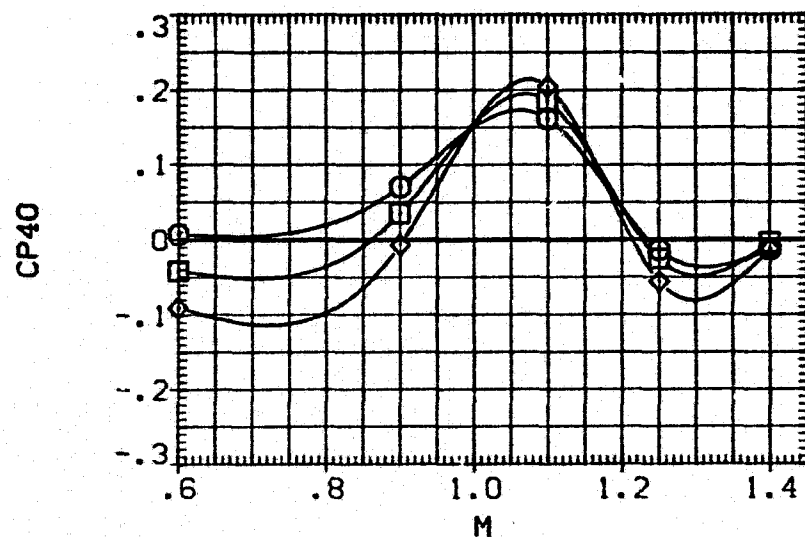
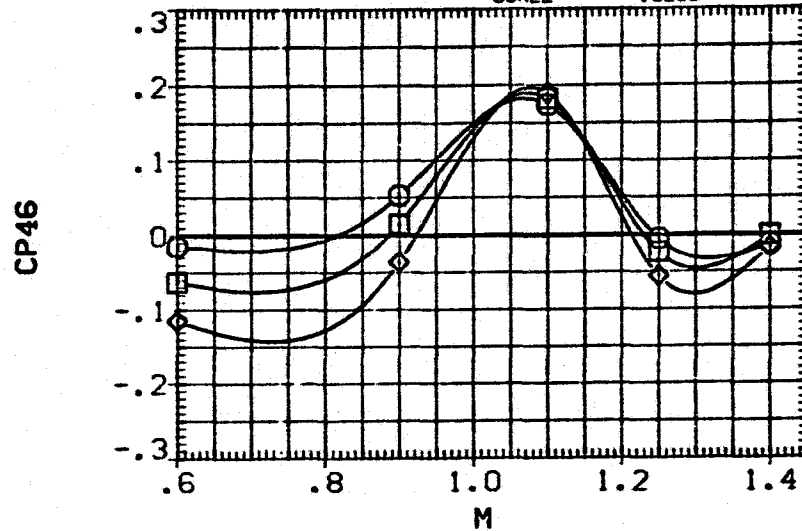
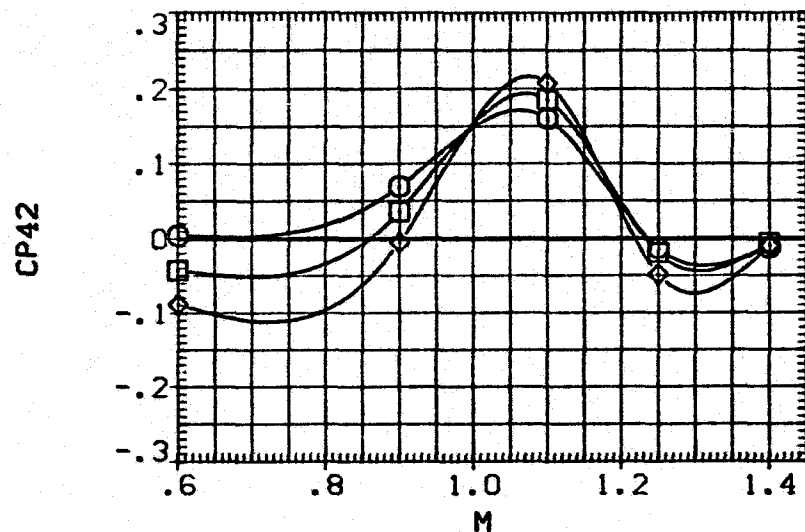


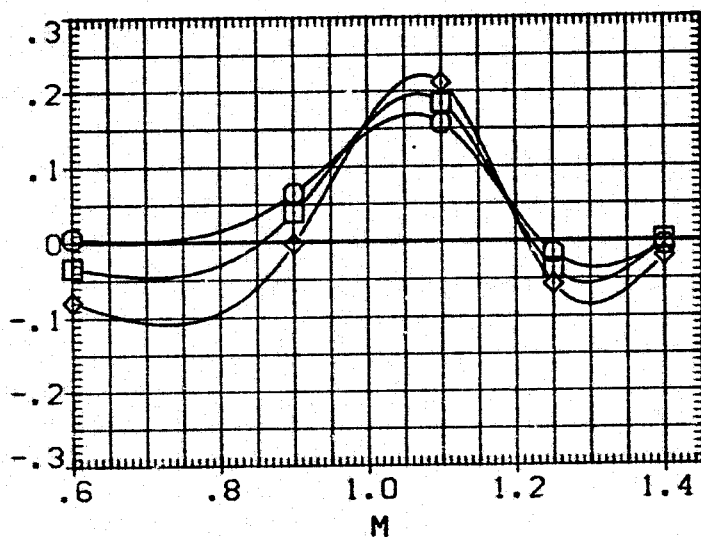
FIG. 127 ORB VENT PRESSURES

(JE4Z28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

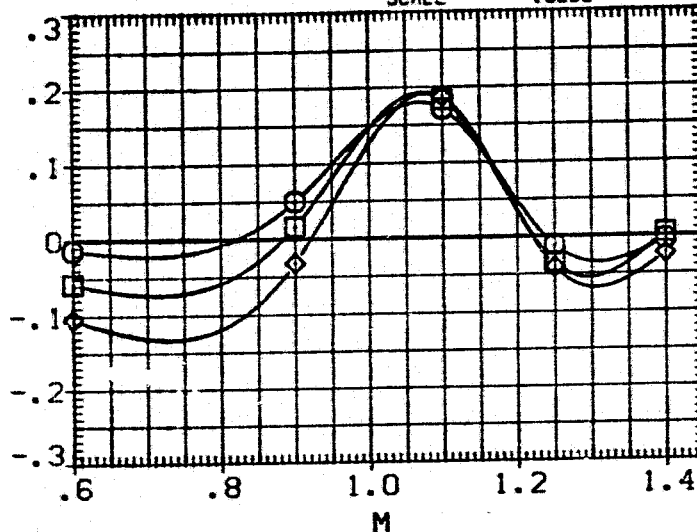
PARAMETRIC VALUES		DATASET		MACH	
ALPHA	BETA	ELV-1B	JE4Z28	.600	
-4.000	ELV-09	RN/L	JE4Z30	1.100	
.000			JE4Z32	1.400	
4.000					

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	1290.3000 IN.
BREF	1290.3000 IN.
XMRP	.0000 IN.
YMRP	.0000 IN.
ZMRP	.0000 IN.
SCALE	.0200

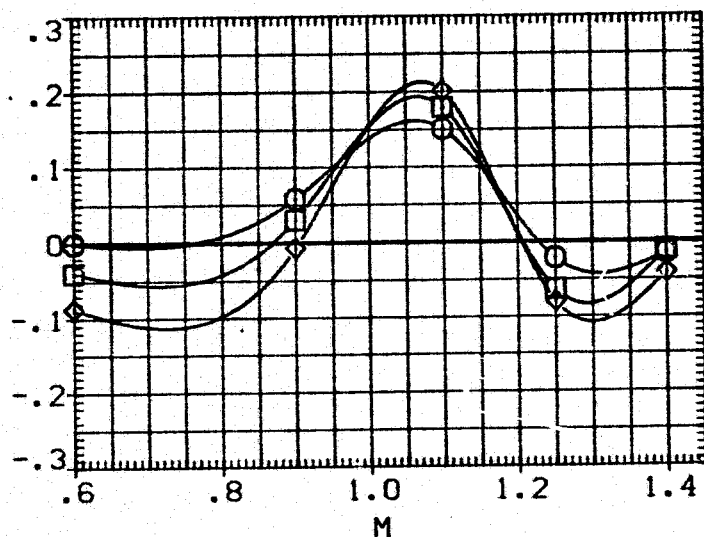
CP41



CP45



CP39



CP43

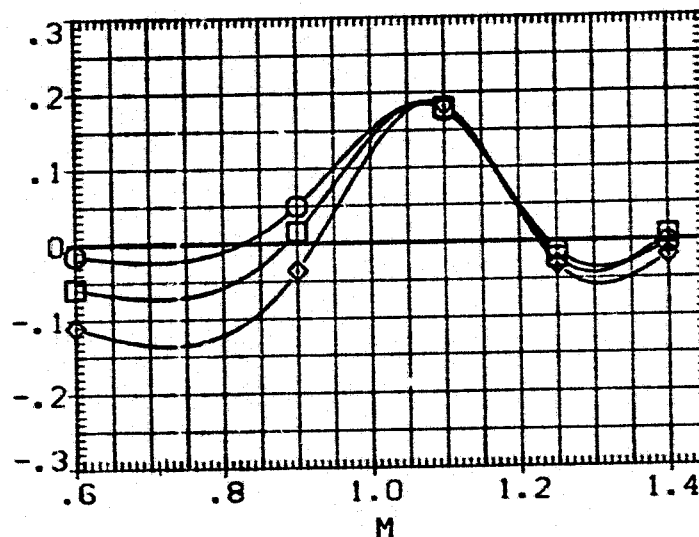


FIG. 127 ORB VENT PRESSURES

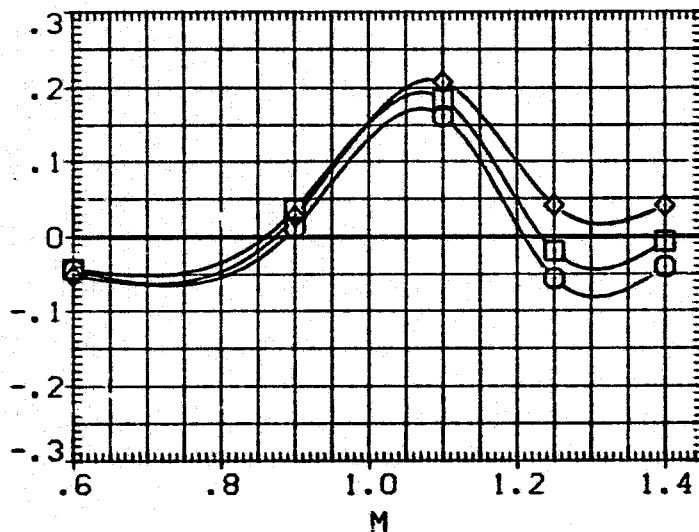
(JE4Y28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-1B .000	JE4Y28	.600
□	.000	ELV-0B .000 RN/L 3.400	JE4Y30	1.100
○	4.000		JE4Y32	1.400

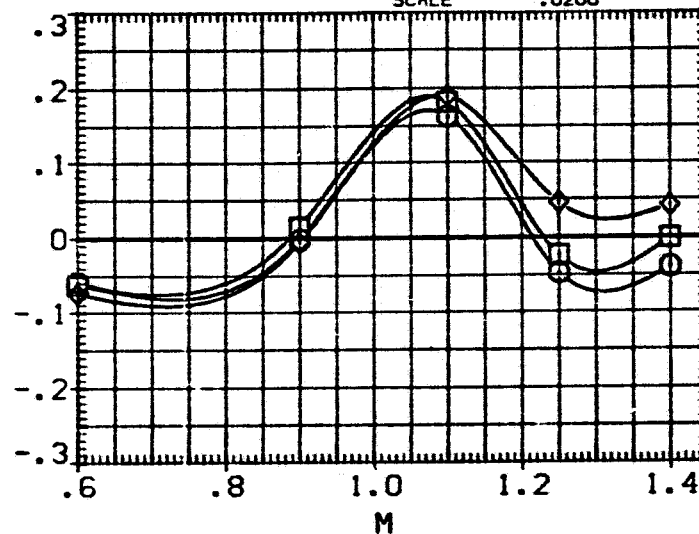
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

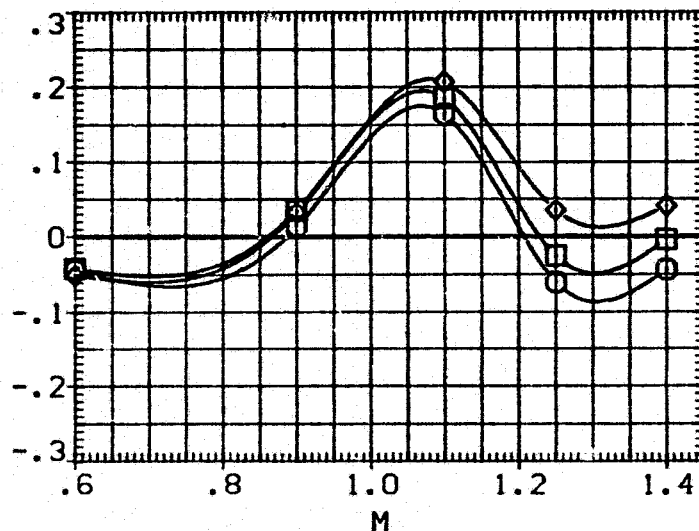
CP42



CP46



CP40



CP44

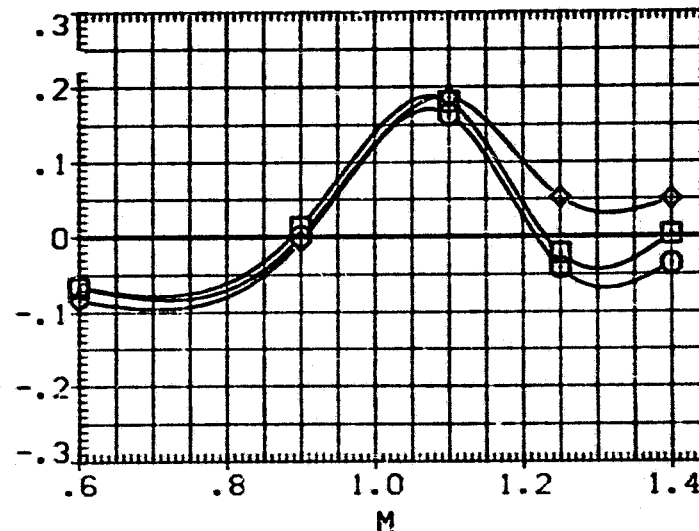


FIG. 127 ORB VENT PRESSURES

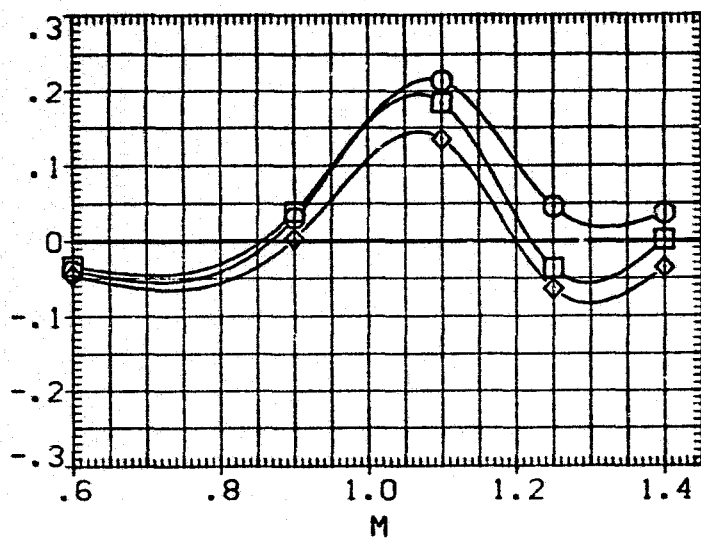
(JE4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH			
◇	-4.000	ALPHA	.000	ELV-1B	.000	JE4Y28	.600
□	.000	ELV-OB	.000	RN/L	3.400	JE4Y30	1.100
◇	4.000					JE4Y32	1.400

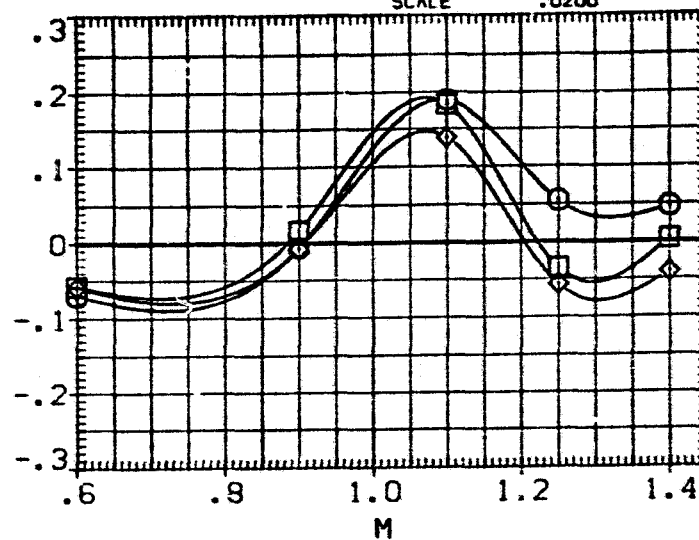
REFERENCE INFORMATION

REFERENCE INFORMATION	VALUE	UNIT
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

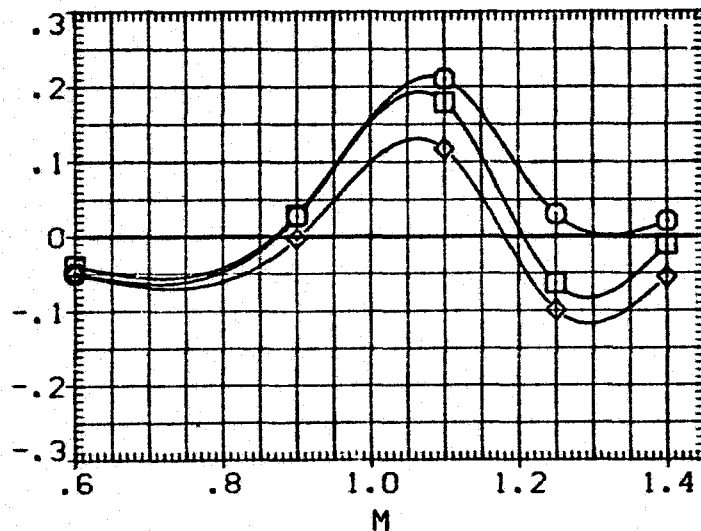
CP41



CP45



CP39



CP43

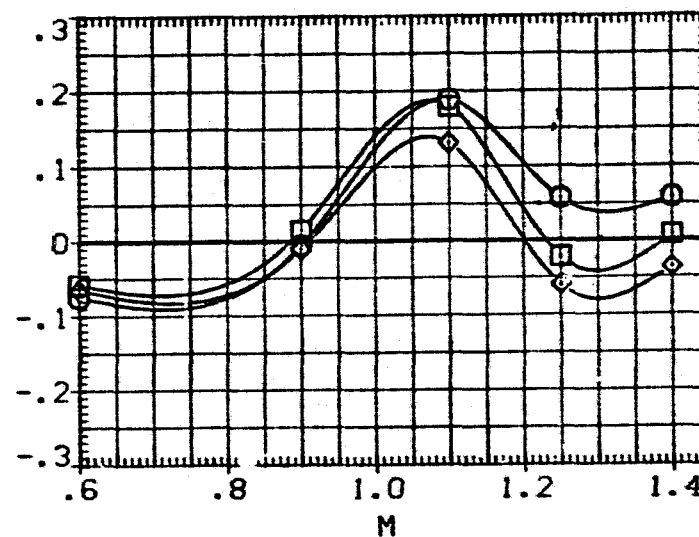


FIG. 127 ORB VENT PRESSURES

[KE4Z28] ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES		DATASET	MACH
□	-4.000	ELV-OB	.000	ELV-IB	KE4Z28	.600
◇	.000		.000	RN/L	KE4Z30	1.100
	4.000				KE4Z32	1.400

REFERENCE INFORMATION

DATASET	MACH	SREF	2690.0000	SO.FT.
KE4Z29	.900	LREF	1290.3000	IN.
KE4Z31	1.250	BREF	1290.3000	IN.
		XMRP	.0000	IN.
		YMRP	.0000	IN.
		ZMRP	.0000	IN.
		SCALE	.0200	

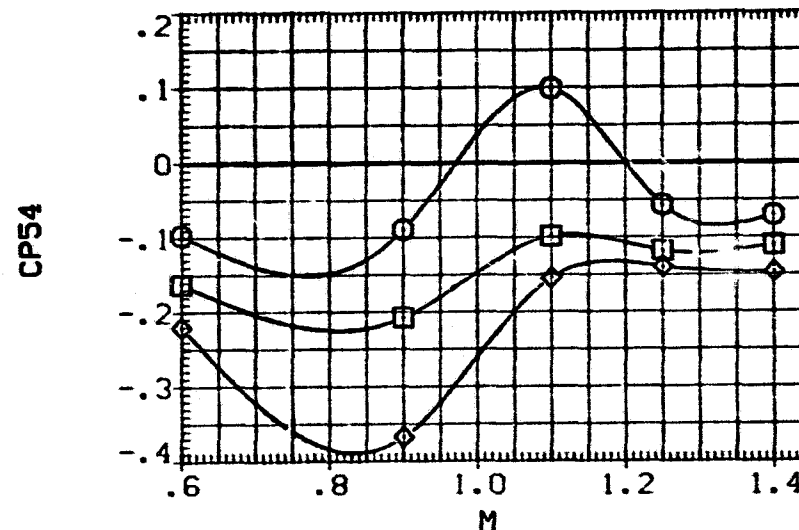
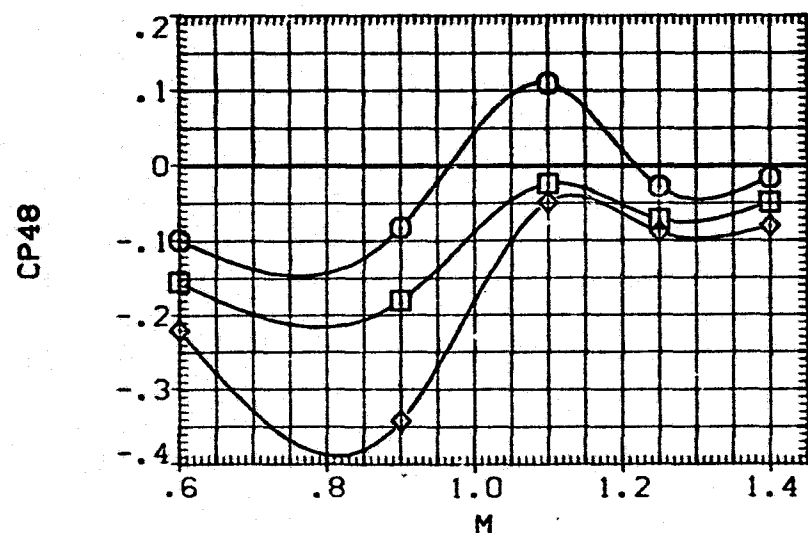
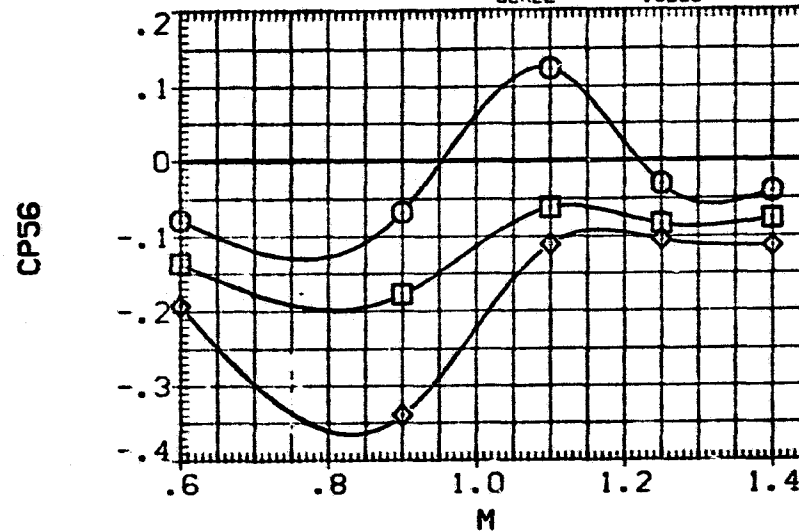
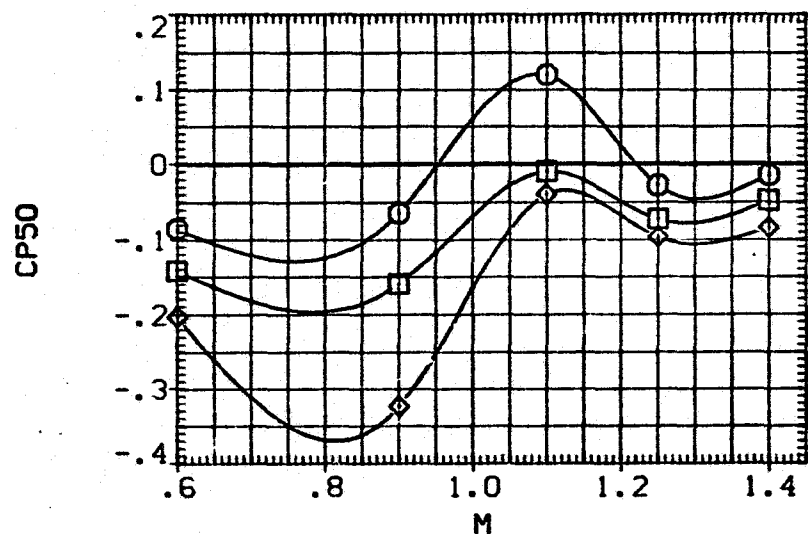


FIG. 127 ORB VENT PRESSURES

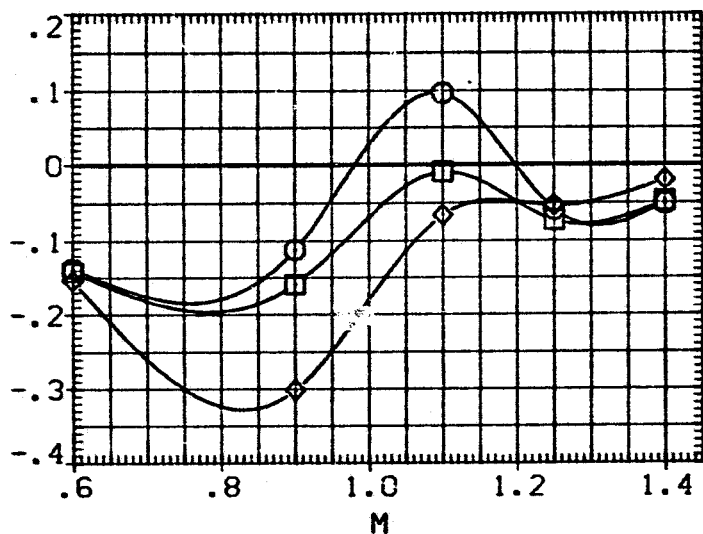
(KE4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA	KE4Y28	.600
□	.000	ELV-0B	KE4Y30	1.100
◇	4.000	ELV-1B	KE4Y32	1.400
		RN/L		

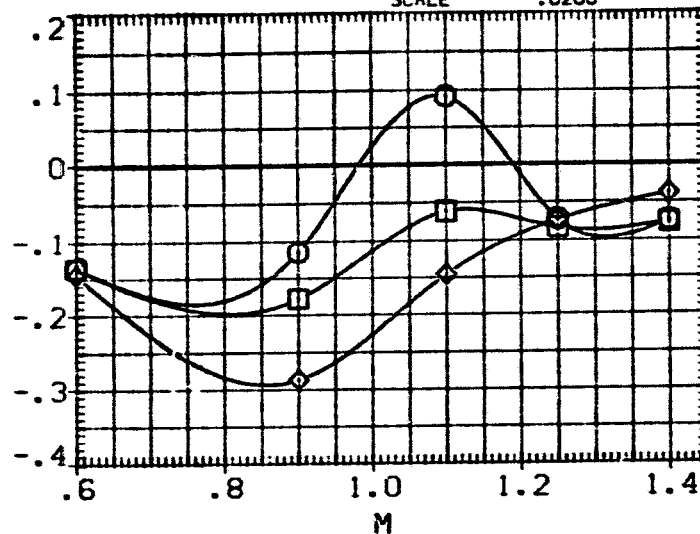
REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

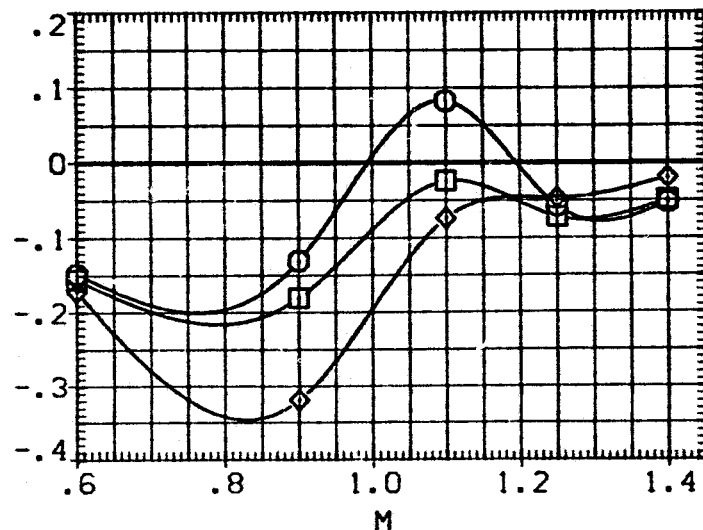
CP50



CP56



CP48



CP54

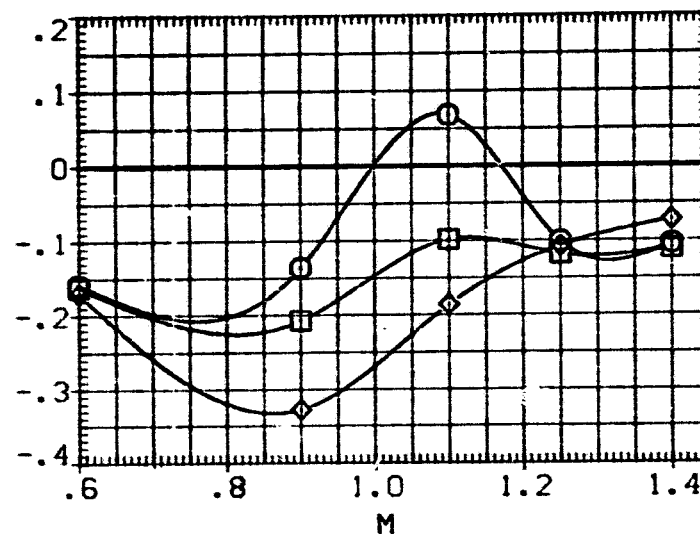


FIG. 127 ORB VENT PRESSURES

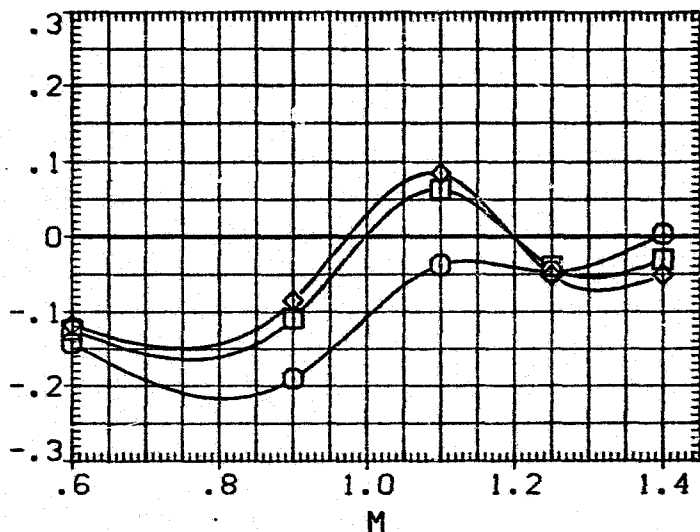
(KE4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-1B .000	KE4Y28	.600
□	.000	ELV-0B .000 RN/L 3.400	KE4Y30	1.100
○	4.000		KE4Y32	1.400

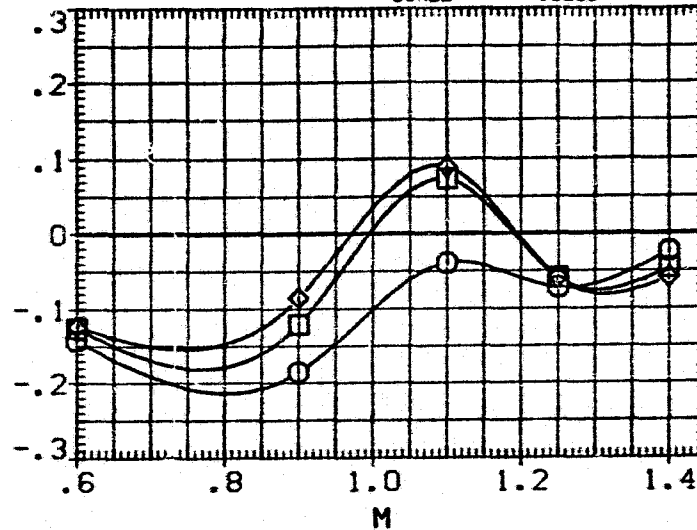
REFERENCE INFORMATION

	VALUE	UNIT
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

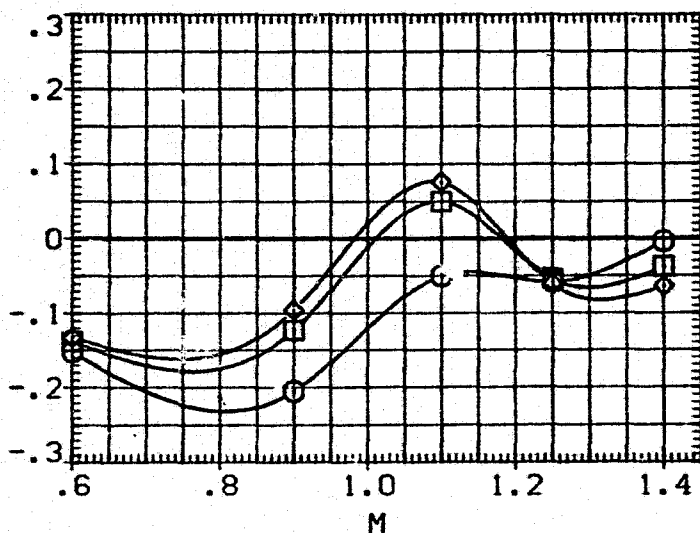
CP49



CP55



CP47



CP53

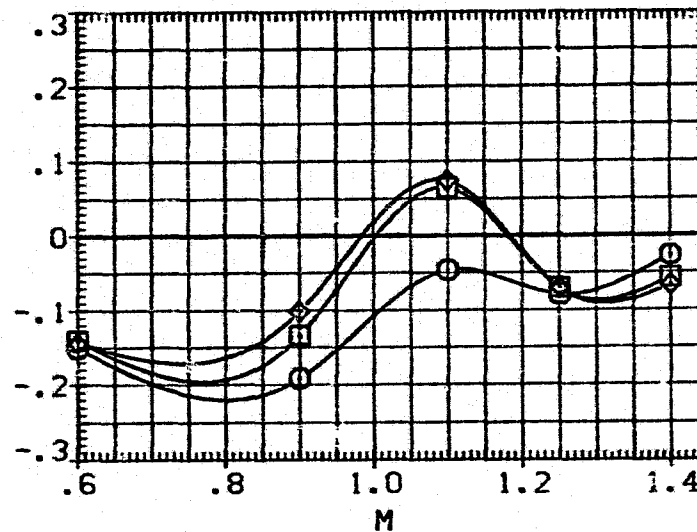


FIG. 127 ORB VENT PRESSURES

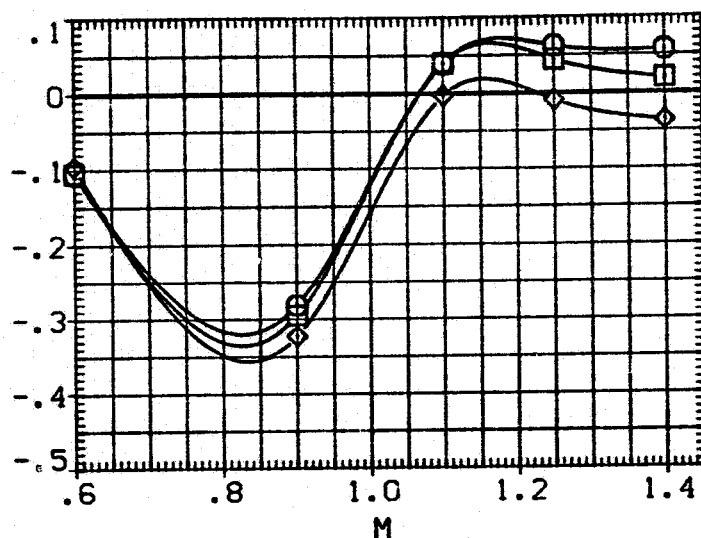
(DE4Z28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	DATASET	MACH
○	-4.000		.000	.000			DE4Z28	.600
□	.000		.000			3.400	DE4Z30	1.100
◇	4.000						DE4Z32	1.400

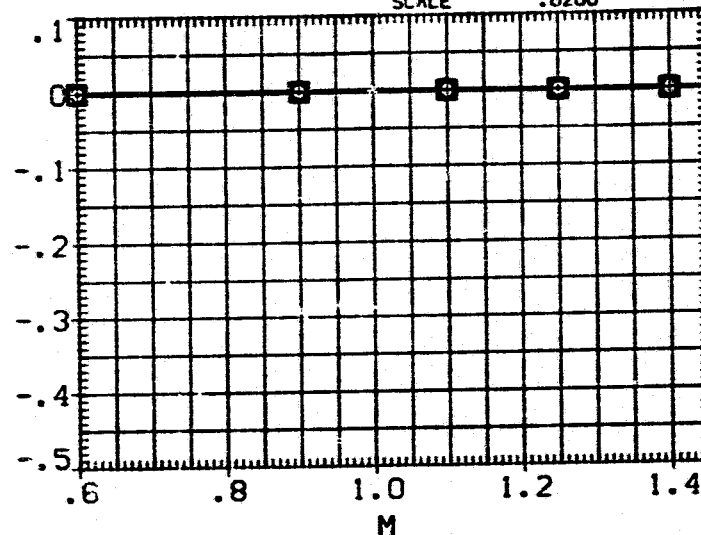
REFERENCE INFORMATION

	SREF	2690.0000	SQ.FT.
	LREF	1290.3000	IN.
	BREF	1290.3000	IN.
	XMRP	.0000	IN.
	YMRP	.0000	IN.
	ZMRP	.0000	IN.
	SCALE	.0200	

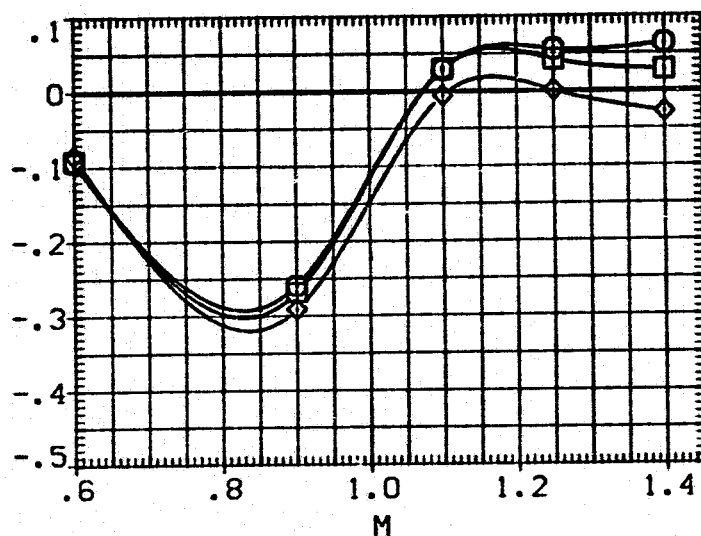
CP78



CP82



CP76



CP80

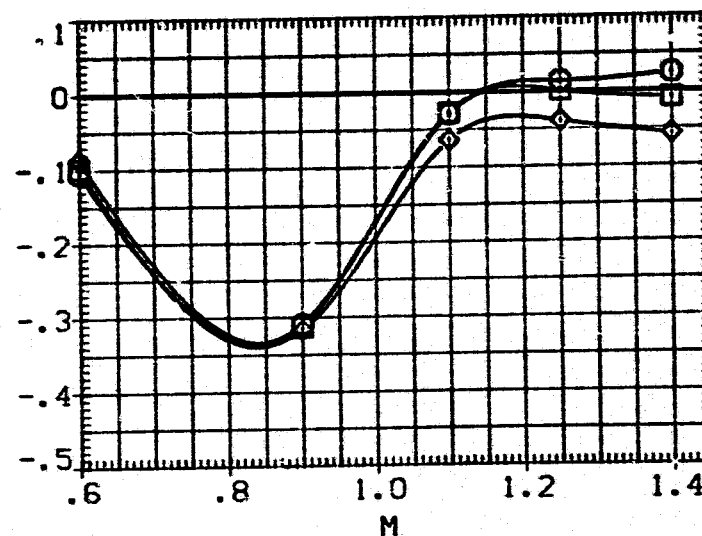


FIG. 127 ORB VENT PRESSURES

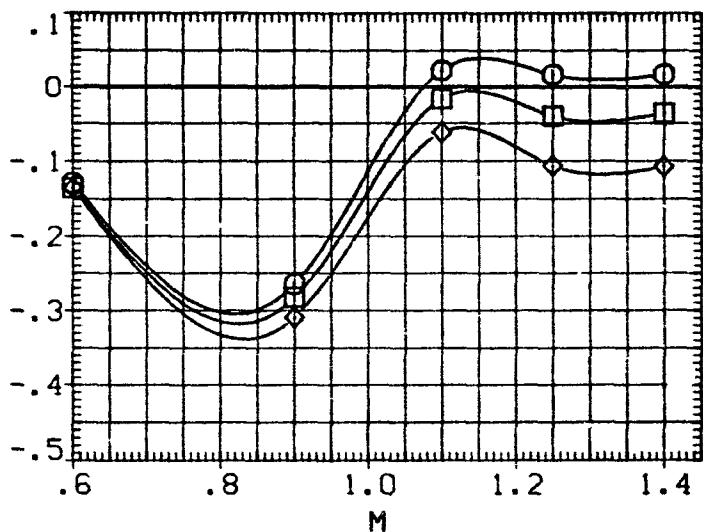
(DE4228) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-IB	ELV-OB	RN/L	DATASET	MACH
◇	-4.000		.000				DE4228	.600
□	.000		.000				DE4230	1.100
◇	4.000		.000				DE4232	1.400

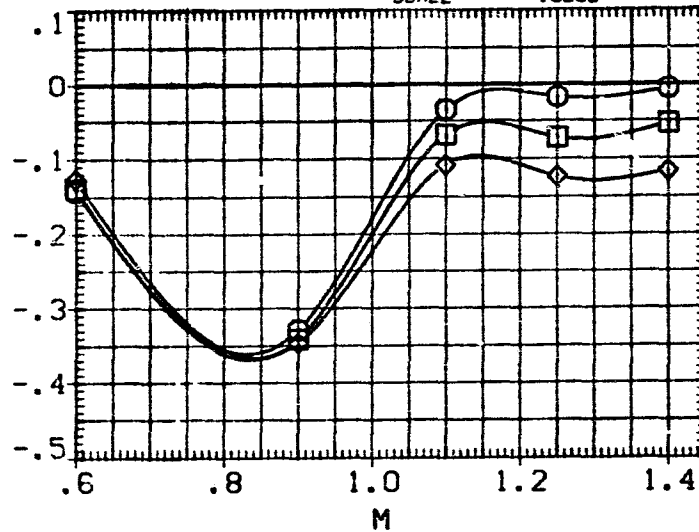
REFERENCE INFORMATION

	2690.0000	SQ. FT.
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

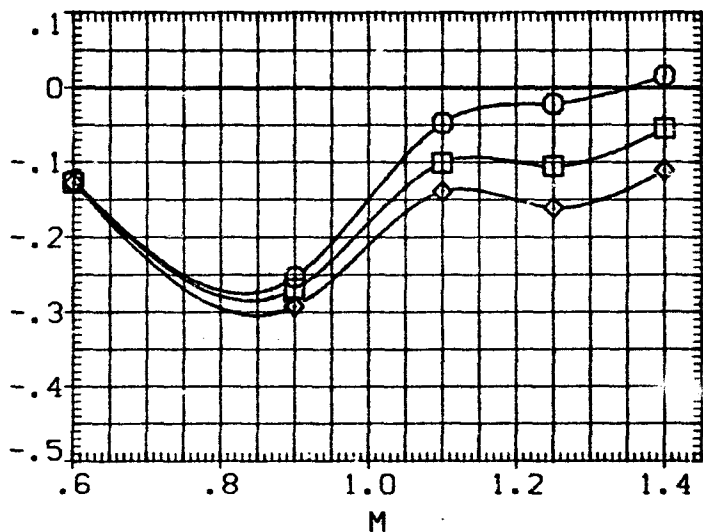
CP77



CP81



CP75



CP79

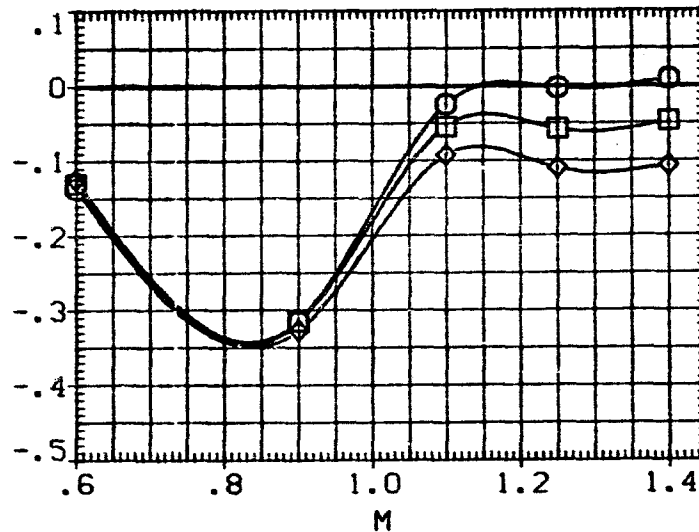


FIG. 127 ORB VENT PRESSURES

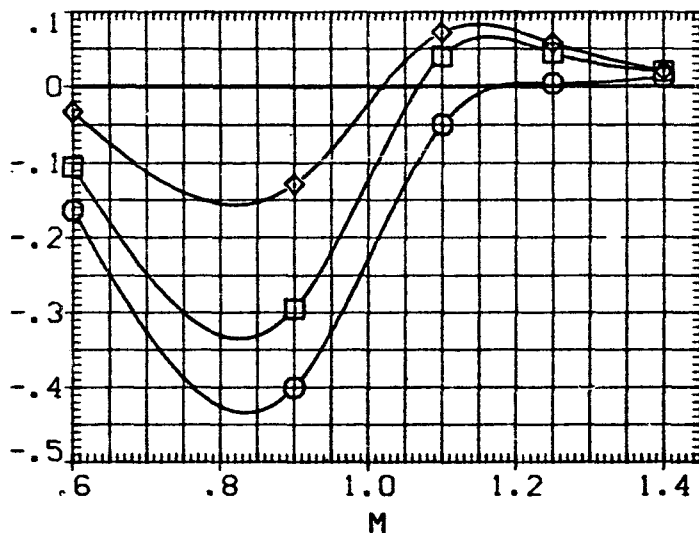
(DE4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	DE4Y28	.600
□	.000	ELV-OB .000 RN/L 3.400	DE4Y30	1.100
◇	4.000		DE4Y32	1.400

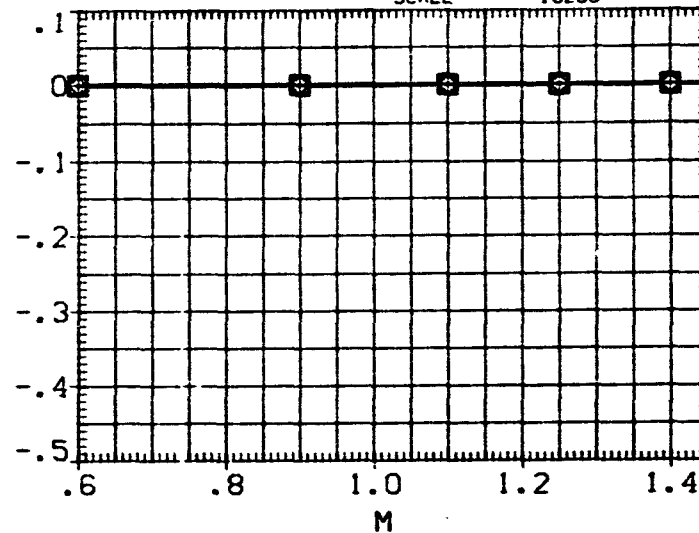
REFERENCE INFORMATION

REFERENCE INFORMATION	VALUE	UNIT
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

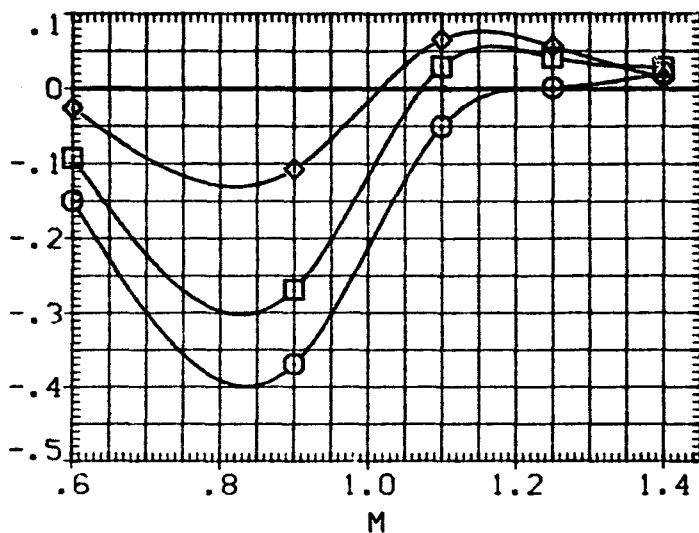
CP78



CP82



CP76



CP80

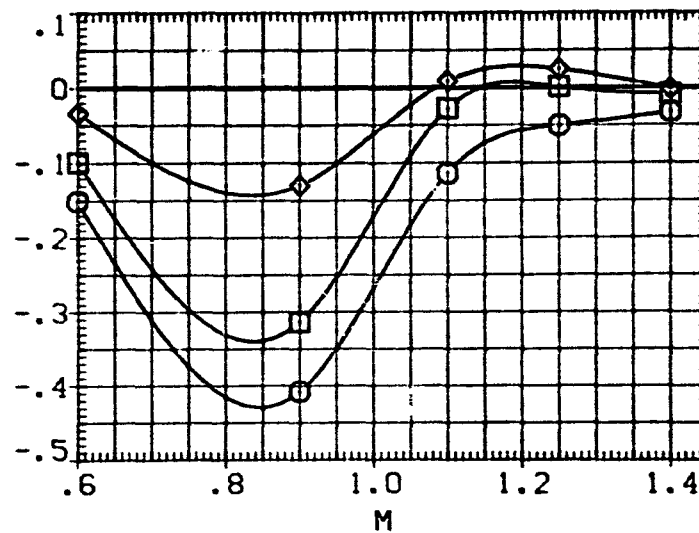


FIG. 127 ORB VENT PRESSURES

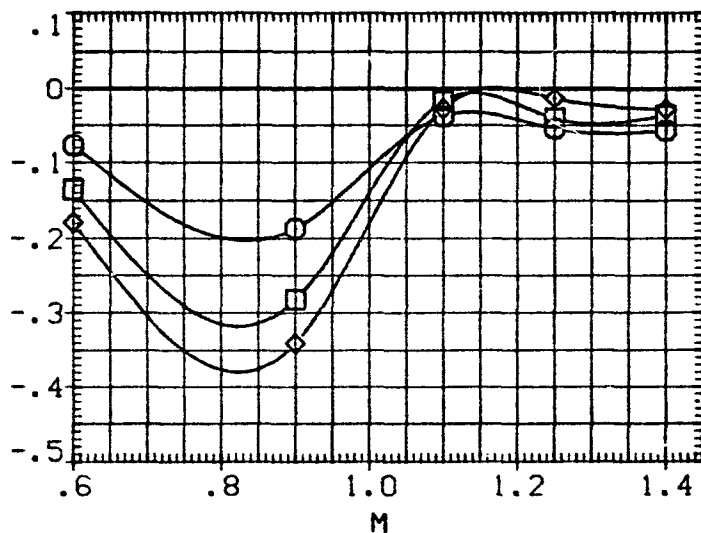
(DE4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	DE4Y28	.600
□	.000	ELV-OB .000 RN/L 3.400	DE4Y30	1.100
◇	4.000		DE4Y32	1.400

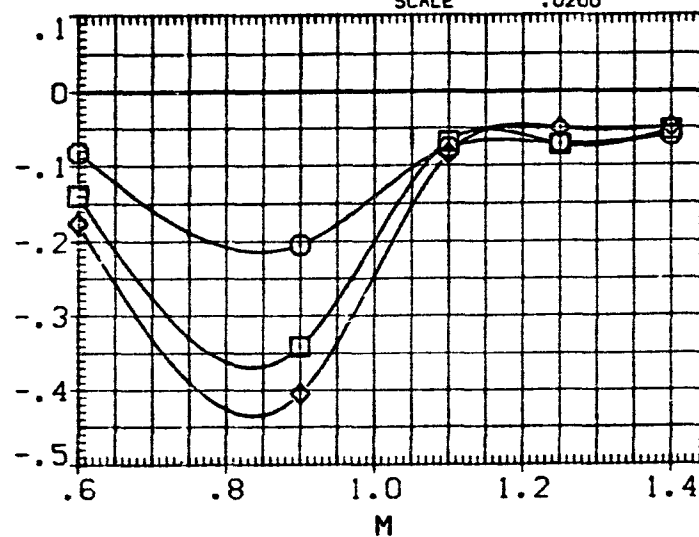
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

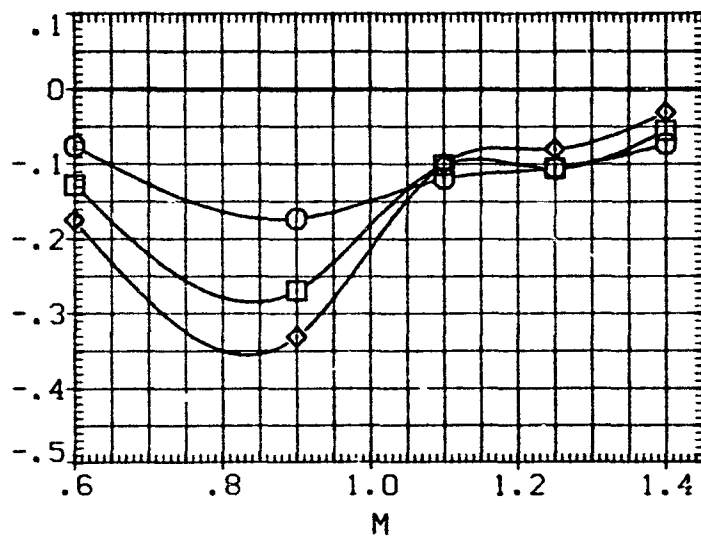
CP77



CP81



CP75



CP79

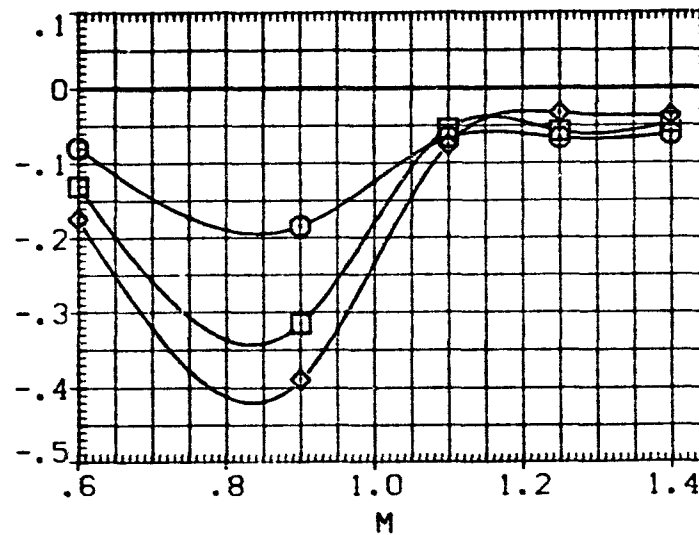


FIG. 127 ORB VENT PRESSURES

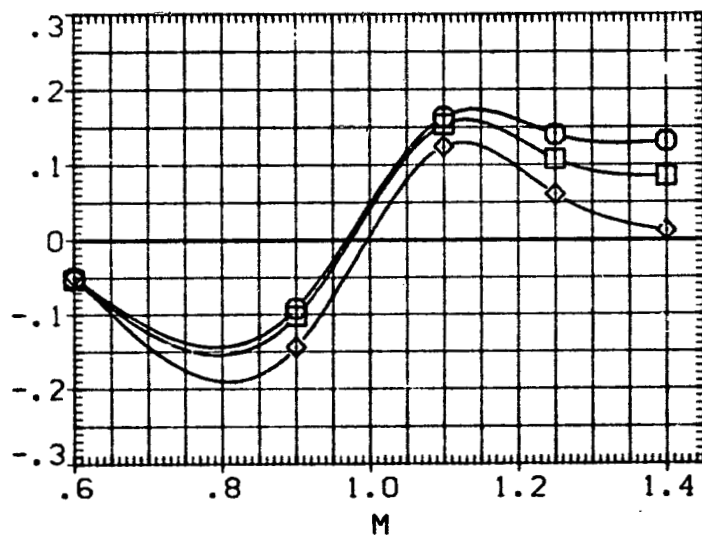
(LE4Z28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-IB	ELV-OB	RN/L	DATASET	MACH
○	-4.000	.000	.000	.000	.000	3.400	LE4Z28	.600
◇	.000	.000	.000	.000	.000	3.400	LE4Z30	1.100
◇	4.000	.000	.000	.000	.000	3.400	LE4Z32	1.400

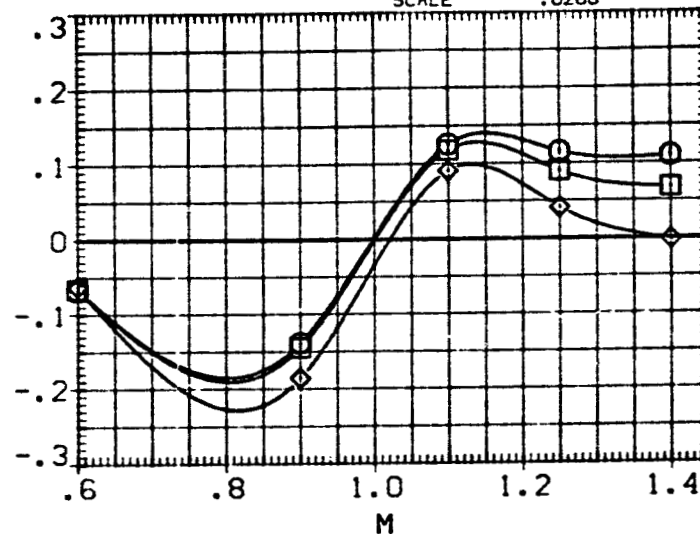
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

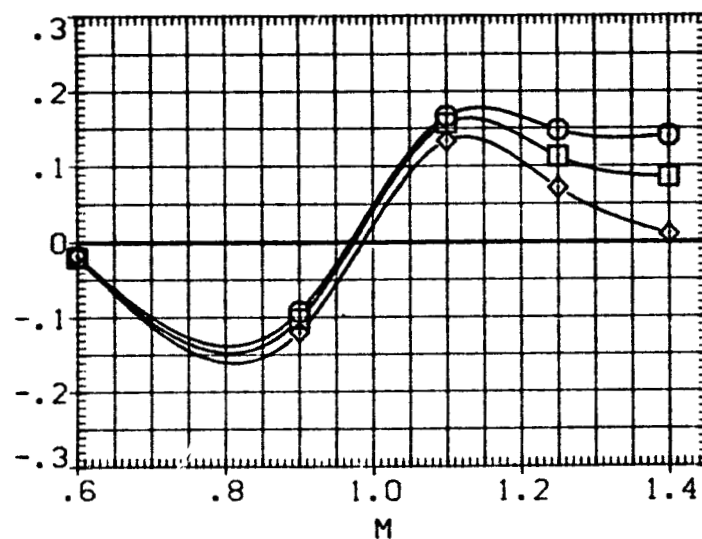
CP62



CP66



CP60



CP64

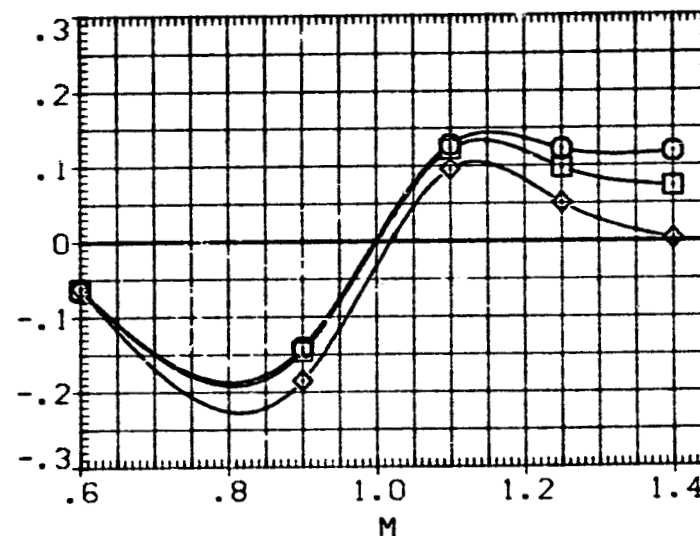


FIG. 127 ORB VENT PRESSURES

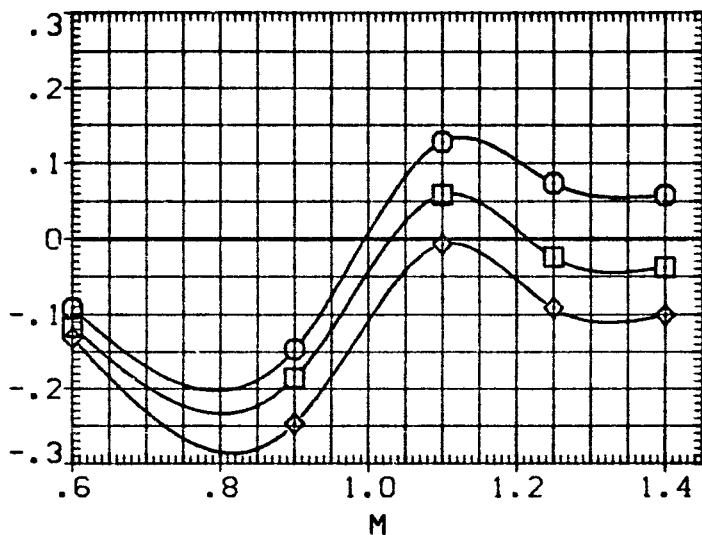
(LE4Z28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-IB	ELV-OB	RN/L	DATASET	MACH
◇	-4.000	.000	.000	.000	.000	.000	LE4Z28	.600
□	.000	.000	.000	.000	.000	3.400	LE4Z30	1.100
○	4.000	.000	.000	.000	.000	.000	LE4Z32	1.400

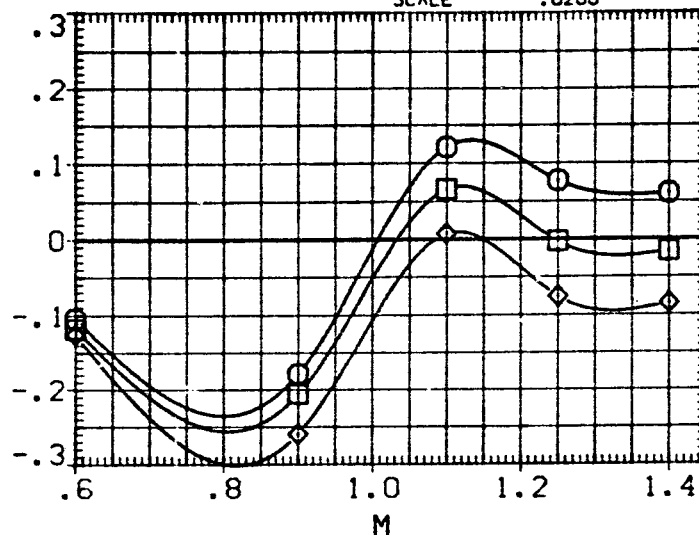
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

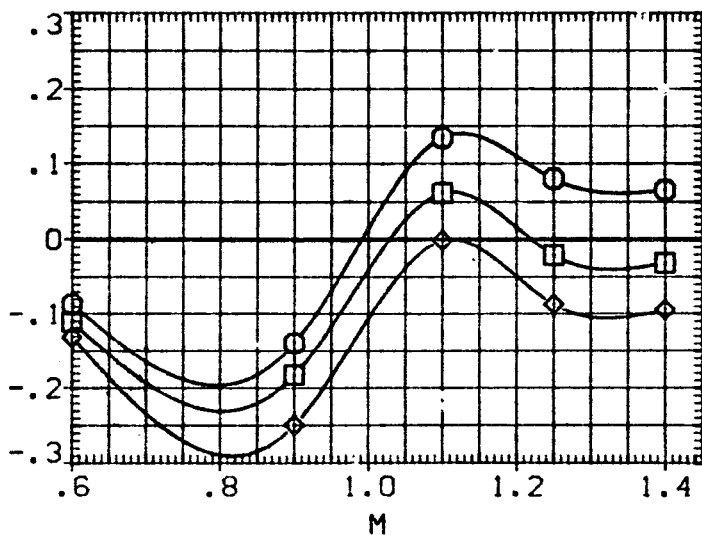
CP61



CP65



CP59



CP63

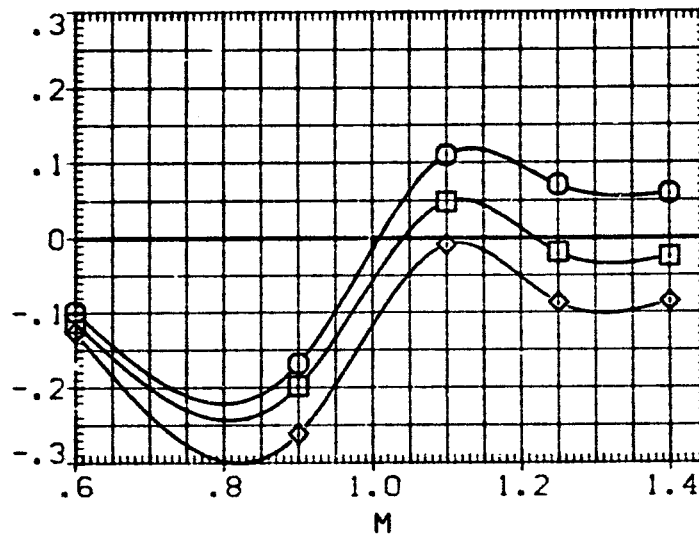


FIG. 127 ORB VENT PRESSURES

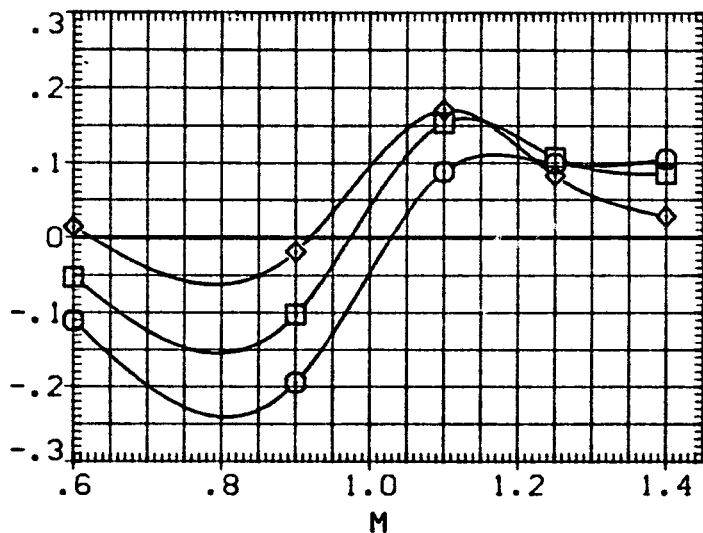
(LE4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-IB .000	LE4Y28	.600
□	.000	ELV-OB .000 RN/L 3.400	LE4Y30	1.100
◇	4.000		LE4Y32	1.400

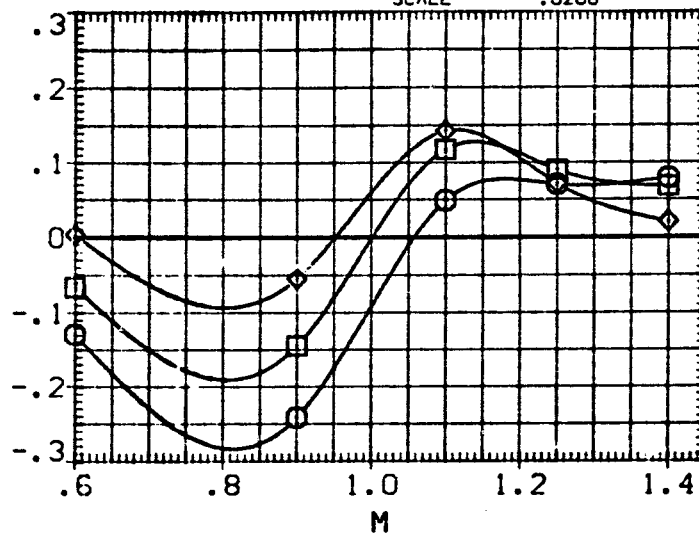
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

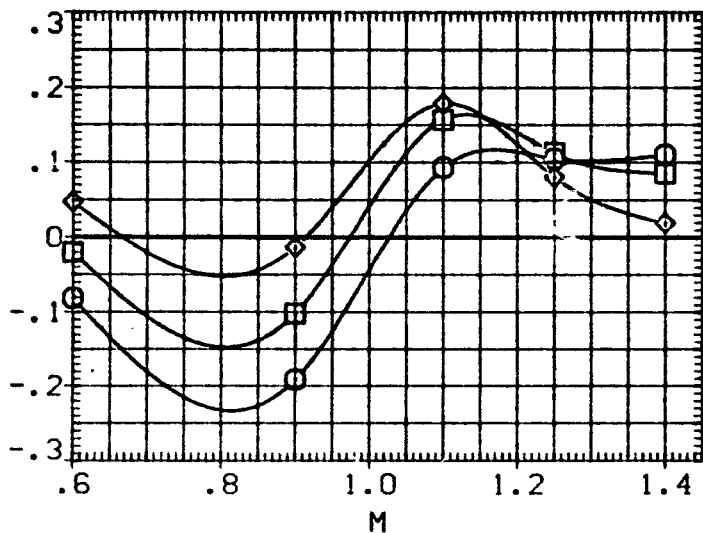
CP62



CP66



CP60



CP64

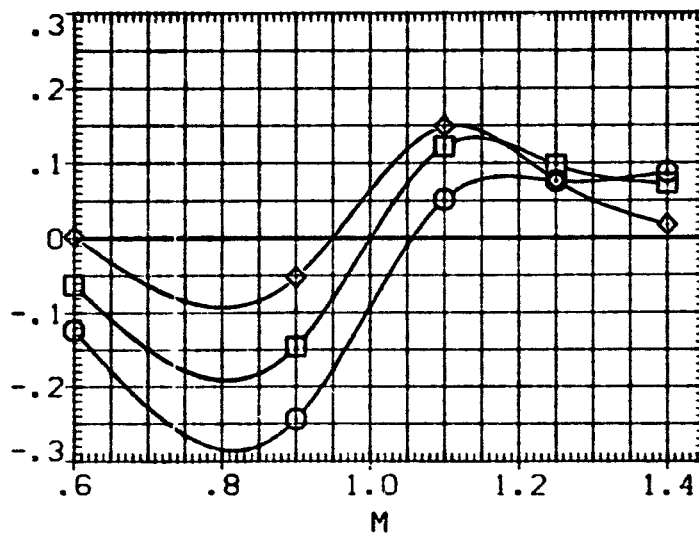


FIG. 127 ORB VENT PRESSURES

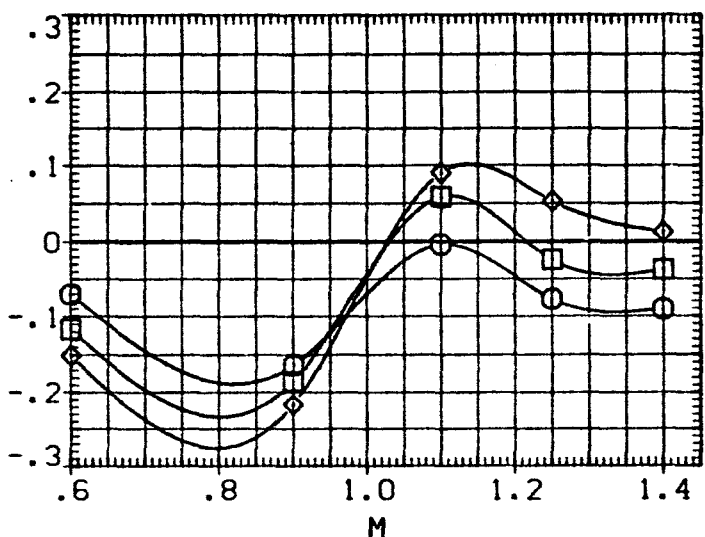
(LE4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-18 .000	LE4Y28	.600
□	.000	ELV-OB .000 RN/L 3.400	LE4Y30	1.100
○	4.000		LE4Y32	1.400

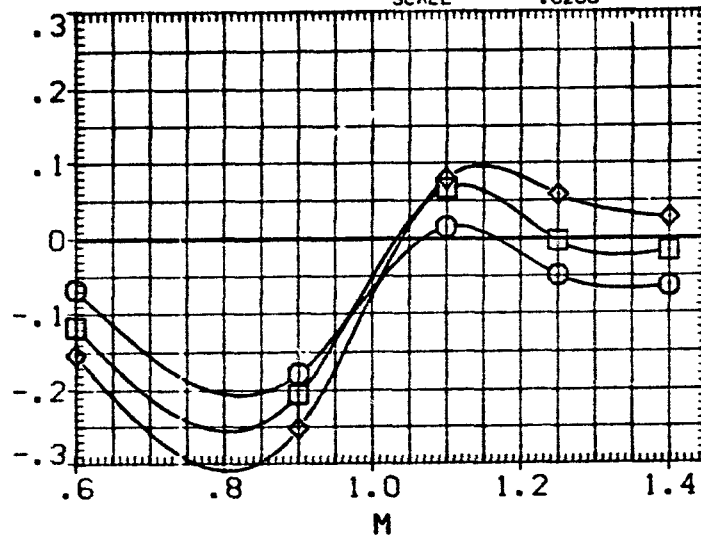
REFERENCE INFORMATION

	2690.0000	50. FT.
SREF	1290.3000	IN.
LREF	1250.3000	IN.
BREF	.0000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

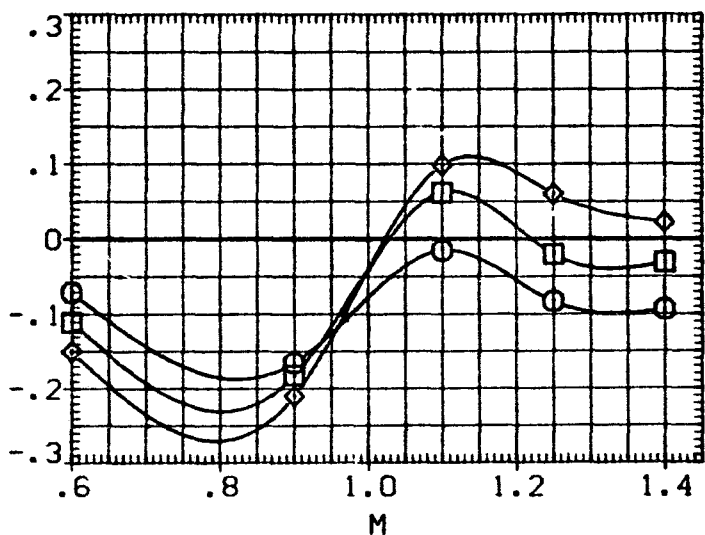
CP61



CP65



CP59



CP63

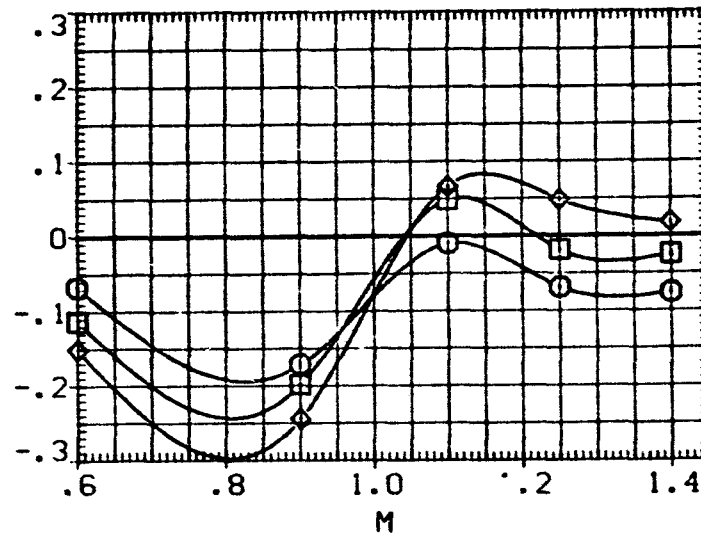


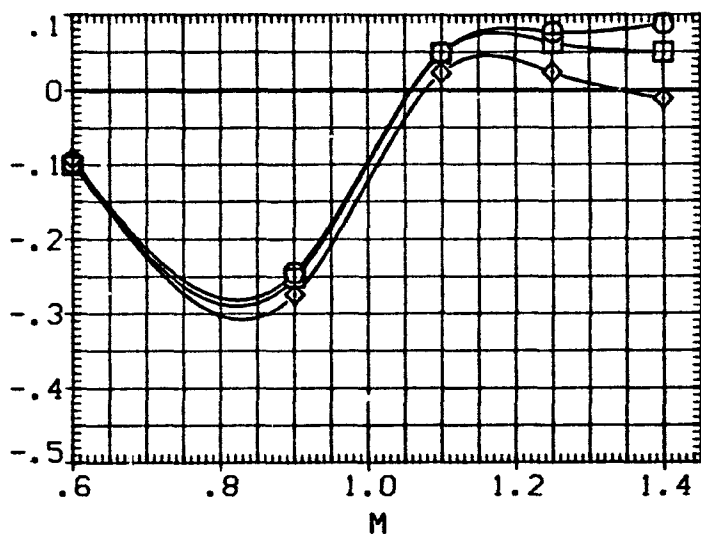
FIG. 127 ORB VENT PRESSURES

(ME4Z28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

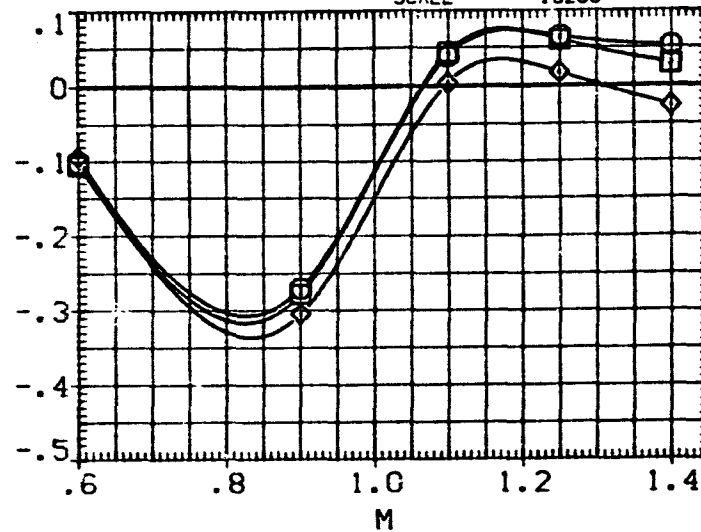
SYMBOL	ALPHA	BETA	PARAMETRIC VALUES		DATASET	MACH
□	-4.000		.000	ELV-1B	.000	ME4Z28
◇	.000	ELV-0B	.000	RN/L	3.400	ME4Z30
	4.000					ME4Z32
						1.400

REFERENCE INFORMATION		
SREF	2650.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

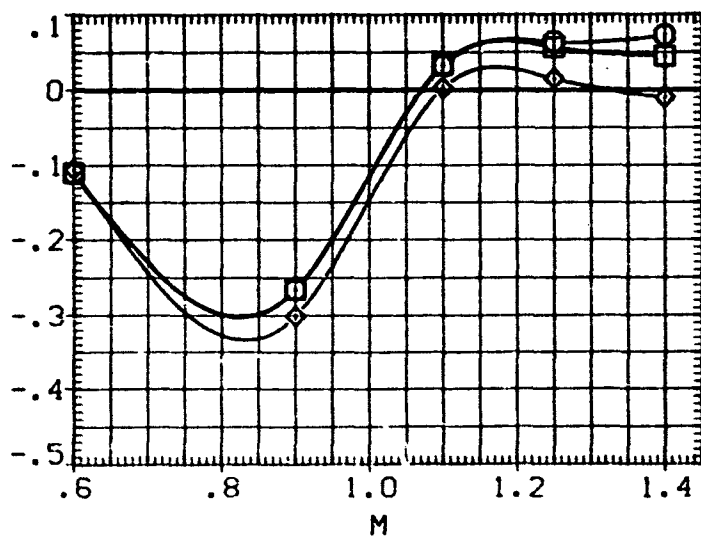
CP70



CP74



CP68



CP72

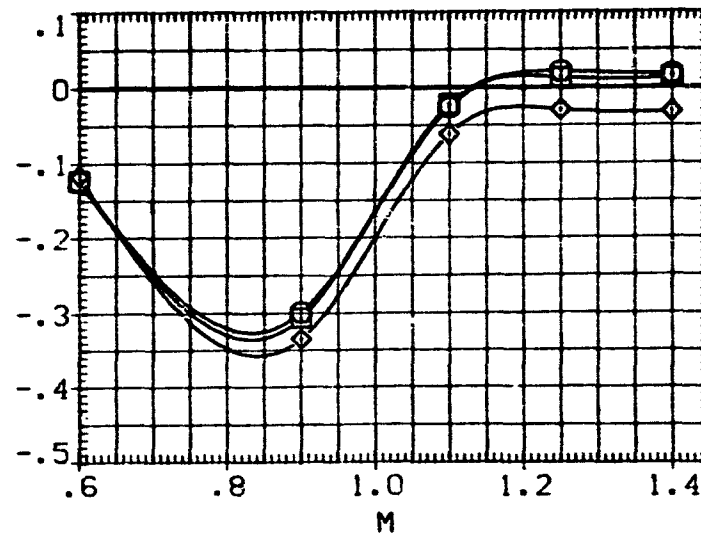


FIG. 127 ORB VENT PRESSURES

(ME4Z28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL

-4.000

ELV-GB

.000 ELV-IB

.000

RN/L

3.400

ME4Z28

•

ME4229

9.

ME4231

1.2

SRFF	2690.0000	50.
------	-----------	-----

LREF 1290.3000

IN.

BREF 1290.3000
YMRB 0000

YMRP	.3000
ZMRP	.0000

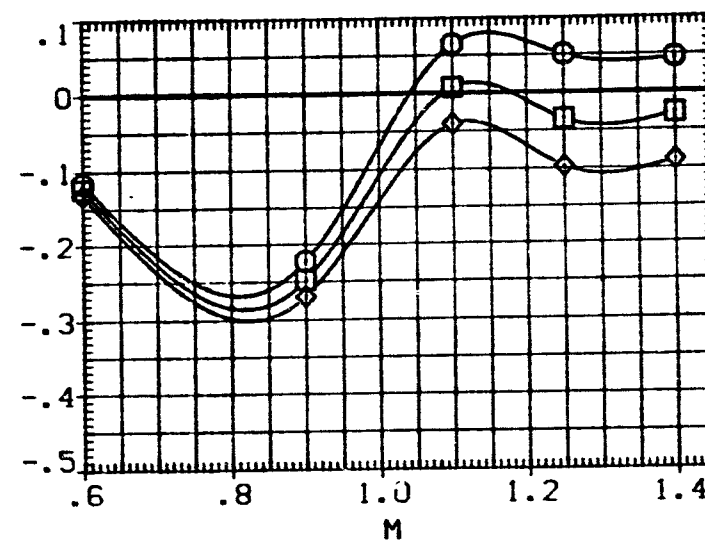
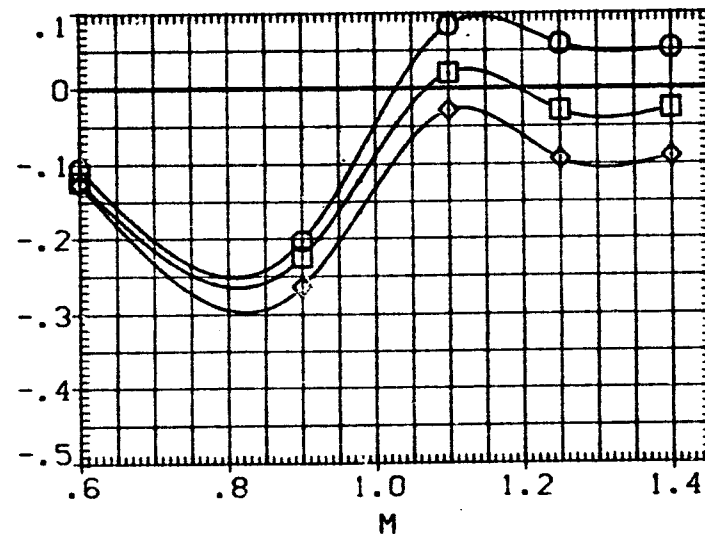
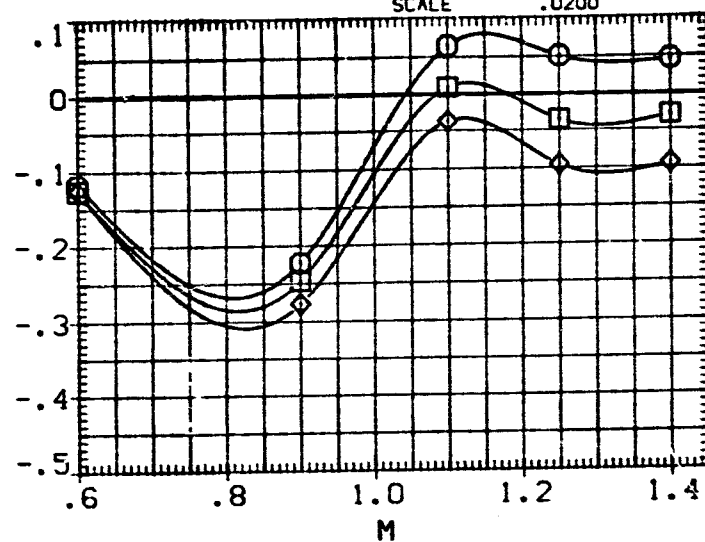
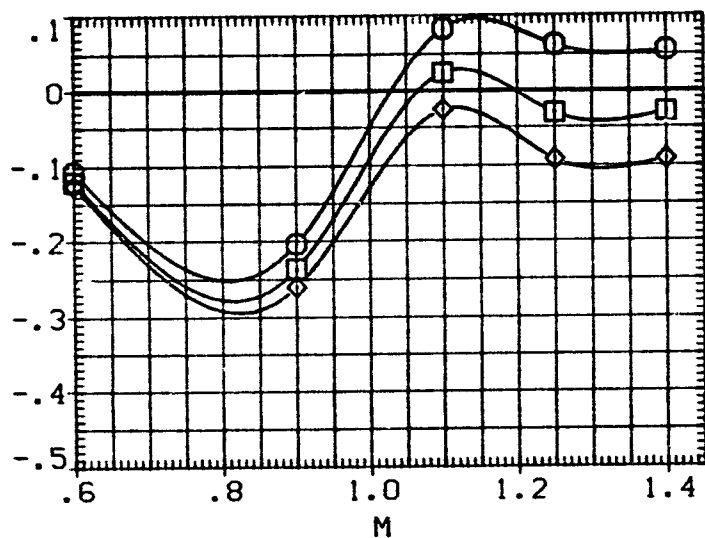
[illegible]

FIG. 127 ORB VENT PRESSURES

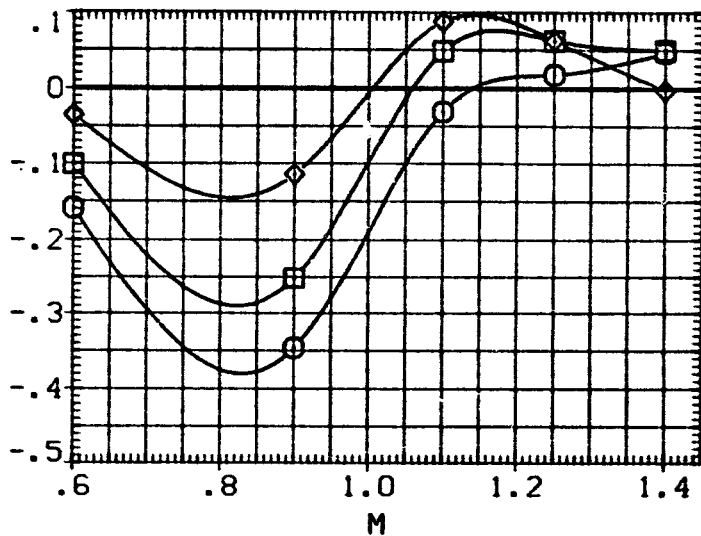
(ME4Y28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	ME4Y28	.600
□	.000	ELV-0B .000 RN/L 3.400	ME4Y30	1.100
◇	4.000		ME4Y32	1.400

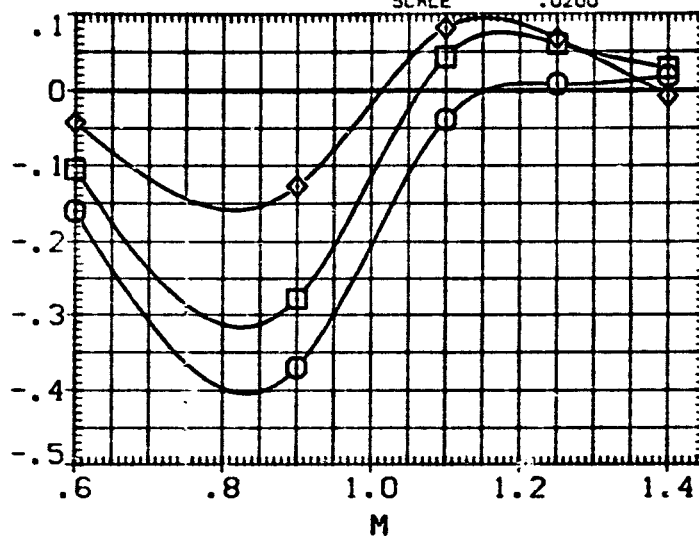
REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

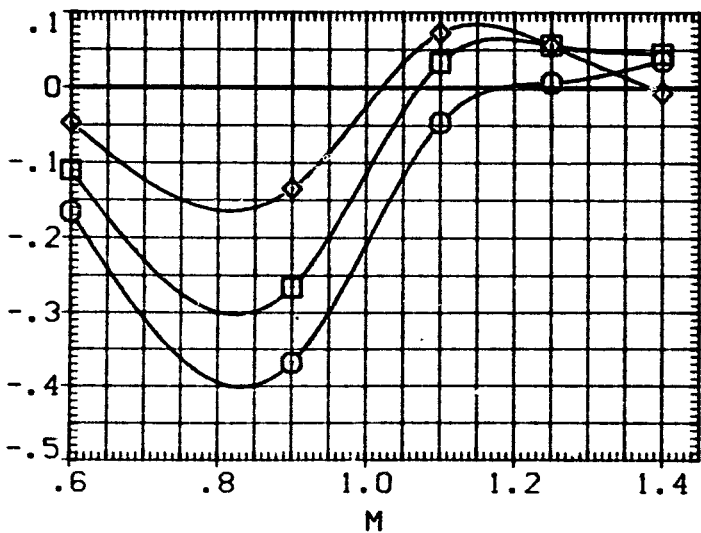
CP70



CP74



CP68



CP72

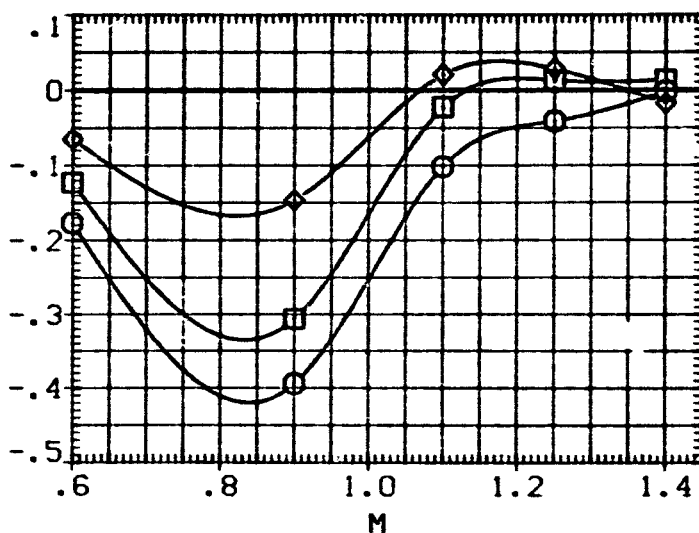


FIG. 127 ORB VENT PRESSURES

(ME4Y28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BET	PARAMETRIC VALUES				DATASET	MACH	DATASET	MACH	REFERENCE INFORMATION		
◇ □ ◇	-4.000	ALPHA	.000	ELV-1B	.000	ME4Y28	.600	ME4Y29	.900	SREF	2690.0000	SQ.FT.
	.000	ELV-0B	.000	RN/L	3.400	ME4Y30	1.100	ME4Y31	1.250	LREF	1290.3000	IN.
	4.000					ME4Y32	1.400			BREF	1290.3000	IN.
										XMRP	.0000	IN.
										YMRP	.0000	IN.
										ZMRP	.0000	IN.
										SCALE	.0200	

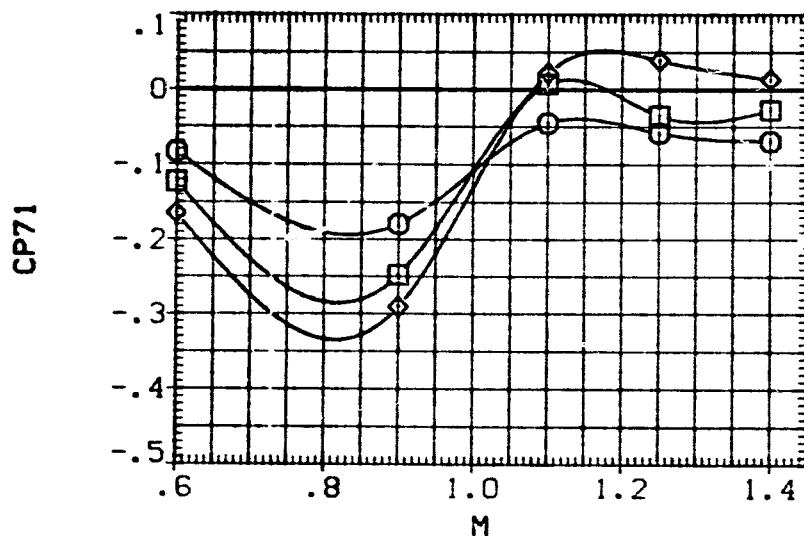
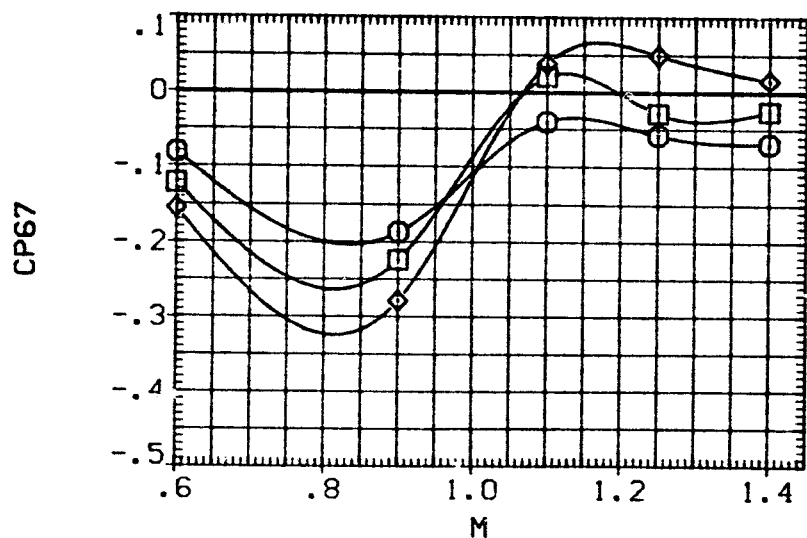
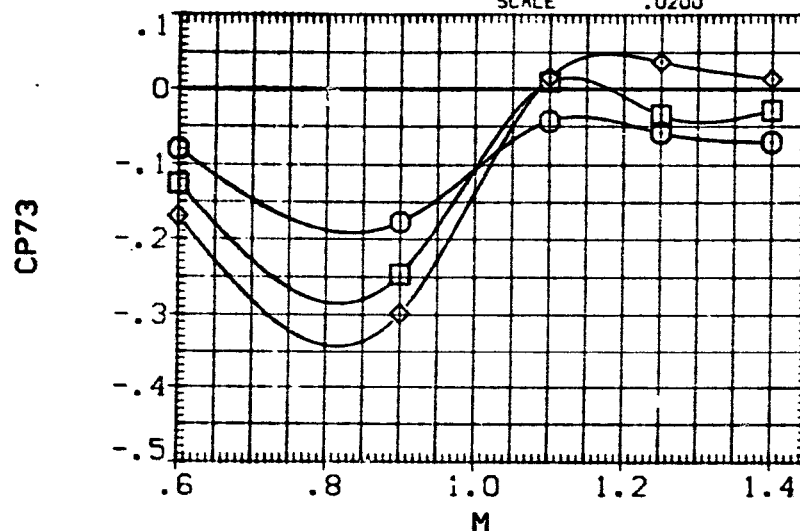
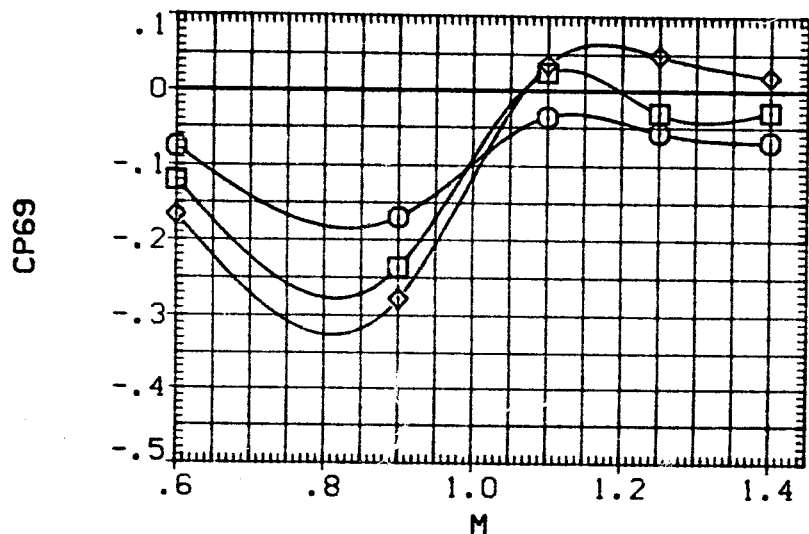


FIG. 127 ORB VENT PRESSURES

(BE4W28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	AI PHA	PARAMETRIC VALUES		DATASET	MACH
○	-4.000	BETA	.000	BE4W28	.600
□	.000	ELV-OB	.000	BE4W30	1.100
◇	4.000			BE4W32	1.400

REFERENCE INFORMATION

	VALUE	UNIT
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

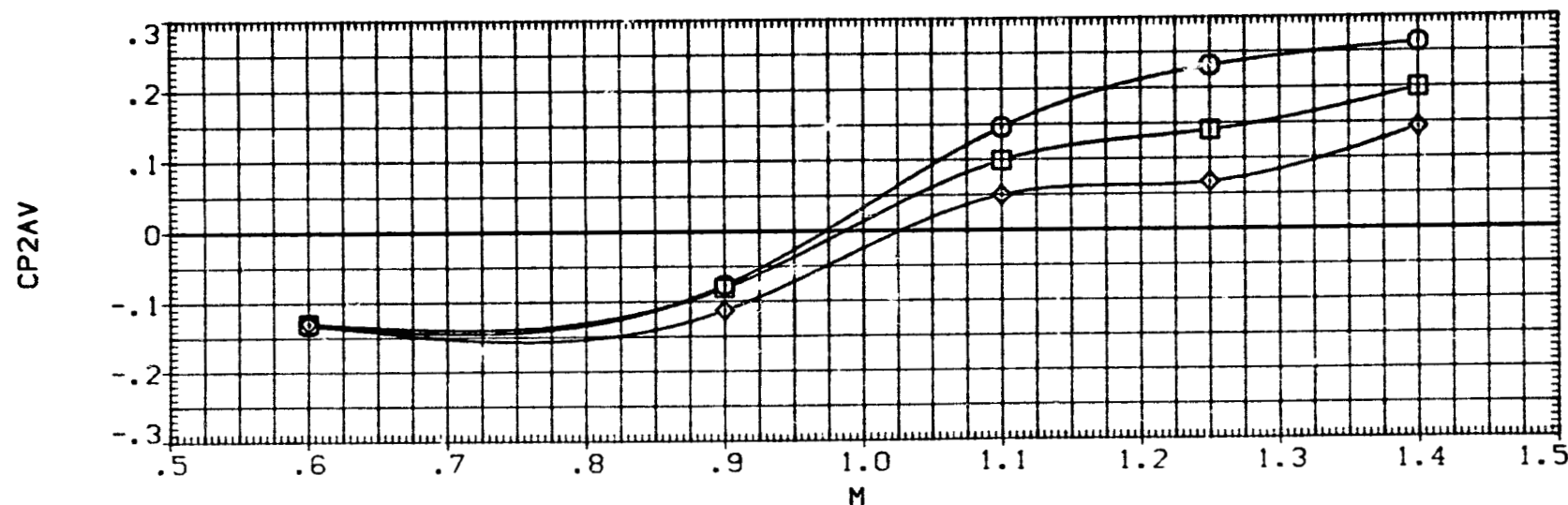
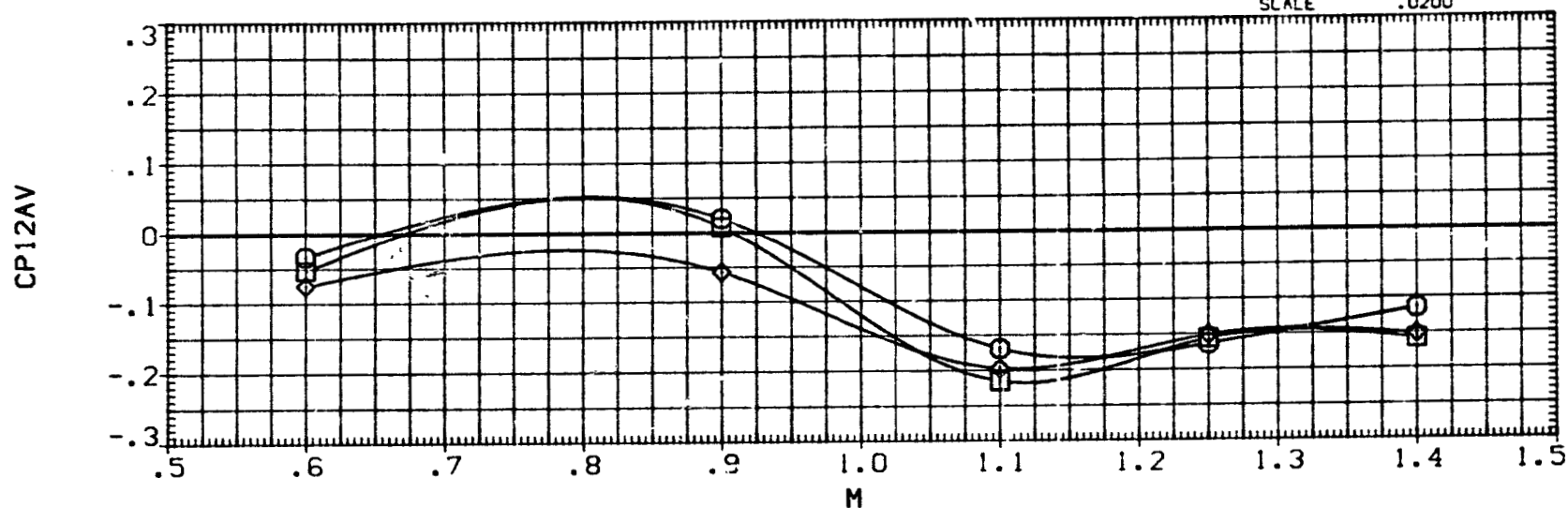


FIG. 128 AVERAGE ORB VENT PRESSURES

(BE4V28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-IB .000	BE4V28	.600
□	.000	ELV-OB .000 RN/L 3.400	BE4V30	1.100
○	4.000		BE4V32	1.400

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

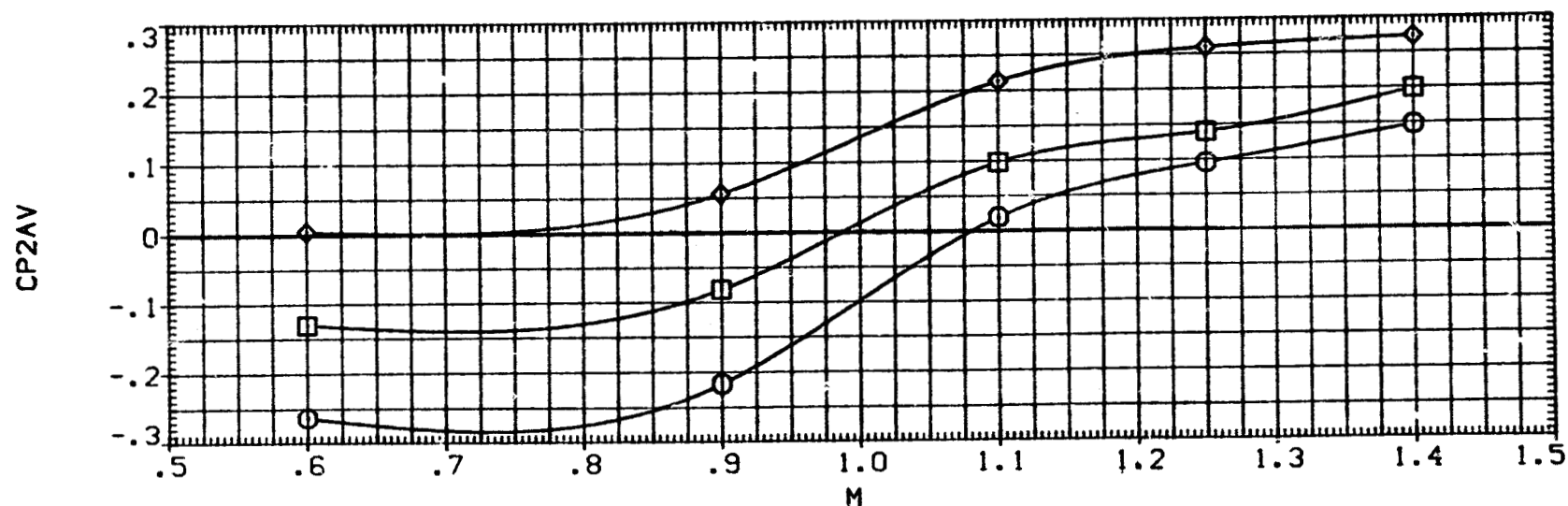
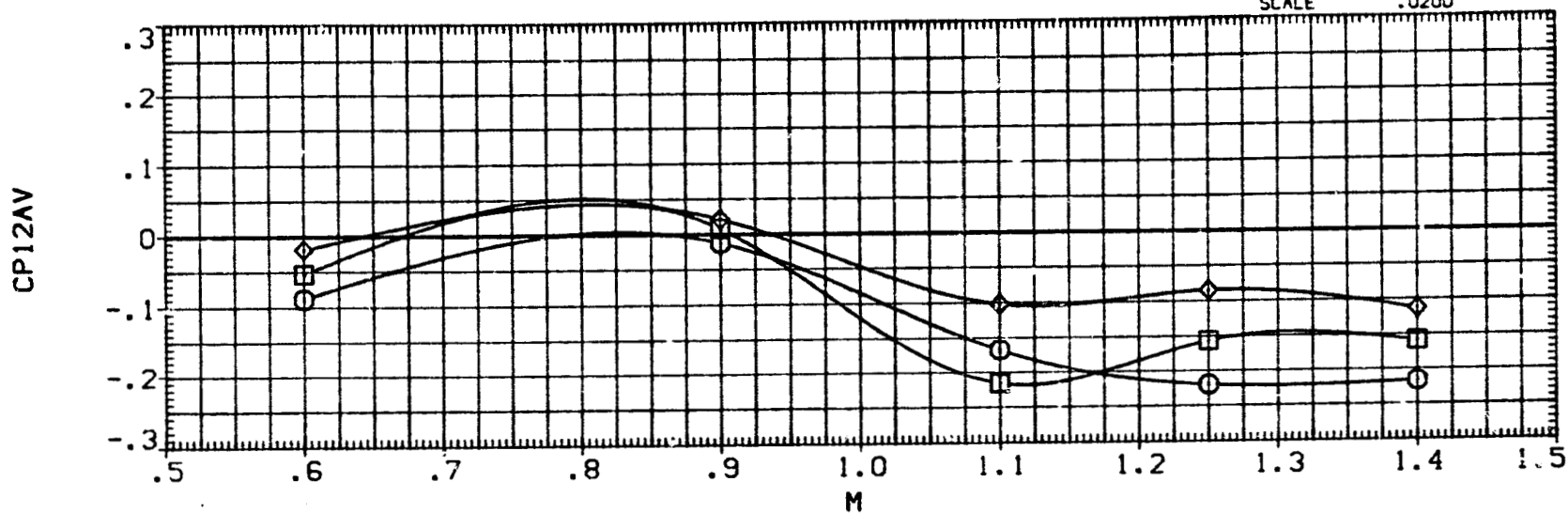


FIG. 128 AVERAGE ORB VENT PRESSURES

(IE4W28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	PARAMETRIC VALUES			DATASET	MACH	DATASET	MACH	
○	-4.000	BETA	.000	ELV-IB	.000	IE4W28	.600	IE4W29	.900
□	.000	ELV-OB	.000	RN/L	3.400	IE4W30	1.100	IE4W31	1.250
◇	4.000					IE4W32	1.400		

REFERENCE INFORMATION

SREF	2690.0000	50.FT.
LF TF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

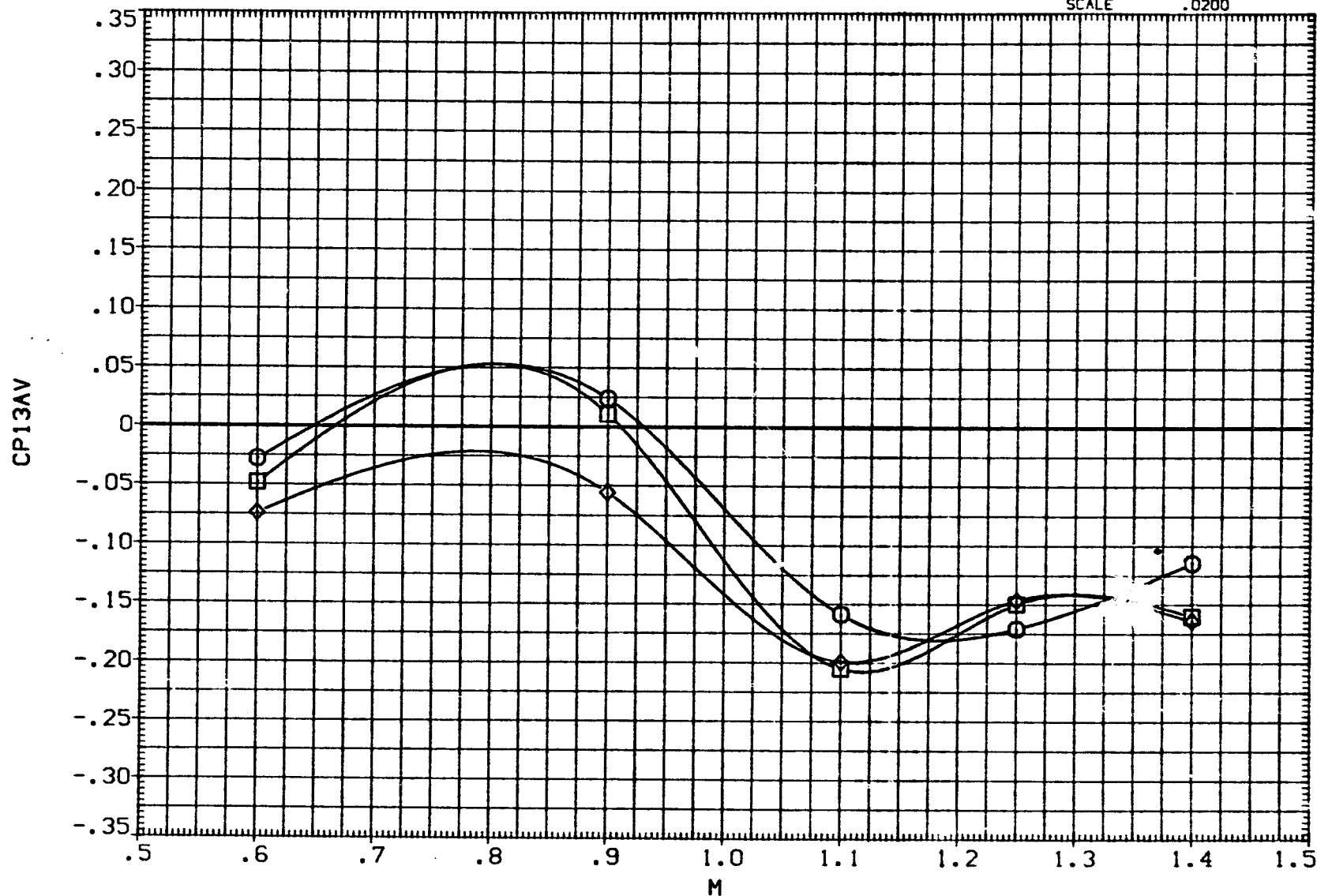


FIG. 128 AVERAGE ORB VENT PRESSURES

(IE4V28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL
○
□
◇

BETA
-4.000
.000
4.000

ALPHA
ELV-08

PARAMETRIC VALUES

.000 ELV-18
.000 RN/L

.000
3.400

DATASET

IE4V28 .600
IE4V30 1.100
IE4V32 1.400

MACH

DATASET

IE4V29 .900
IE4V31 1.250

MACH

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.
LREF 1290.3000 IN.
BREF 1290.3000 IN.
XMRP .0000 IN.
YMRP .0000 IN.
ZMRP .0000 IN.
SCALE .0200

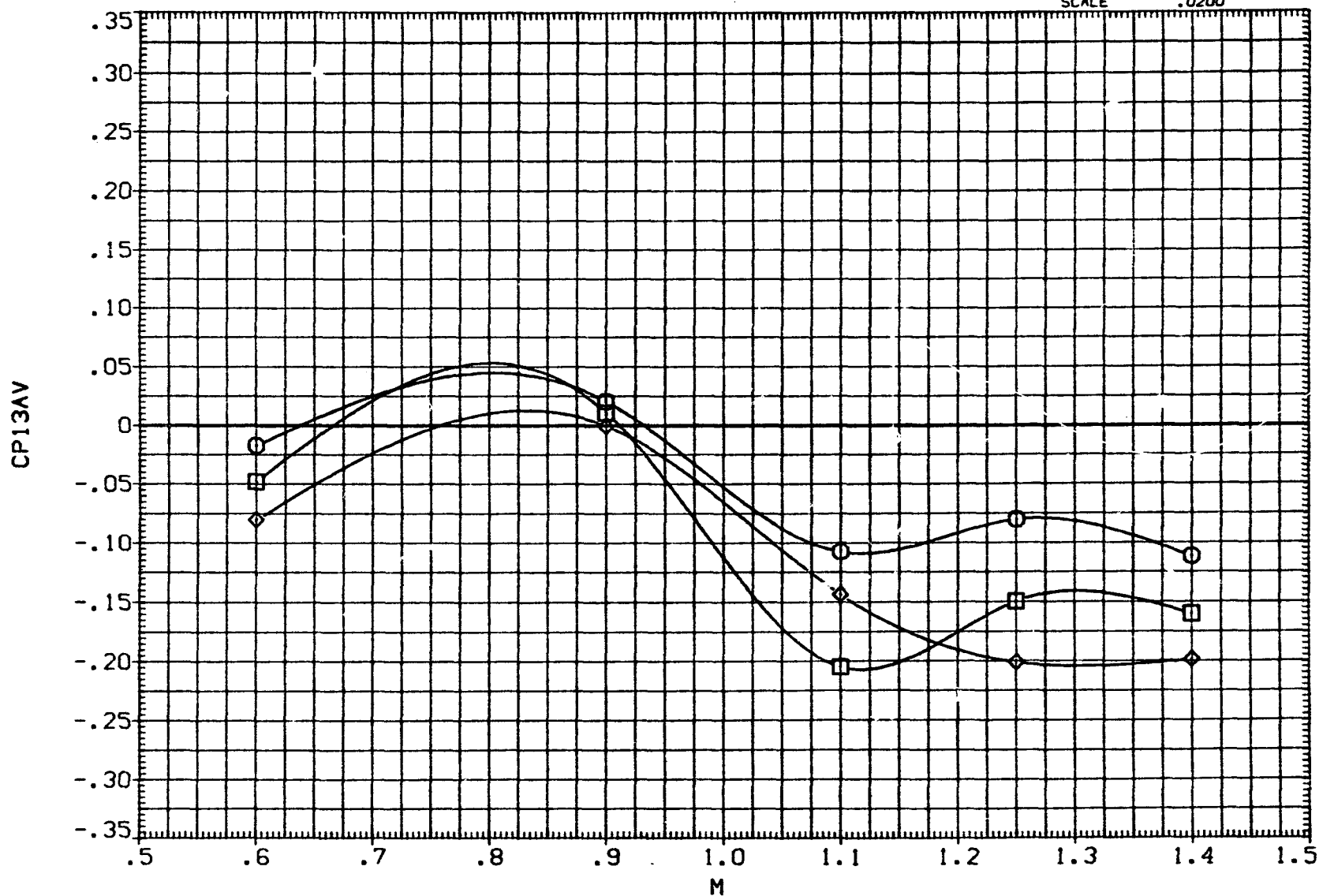


FIG. 128 AVERAGE ORB VENT PRESSURES

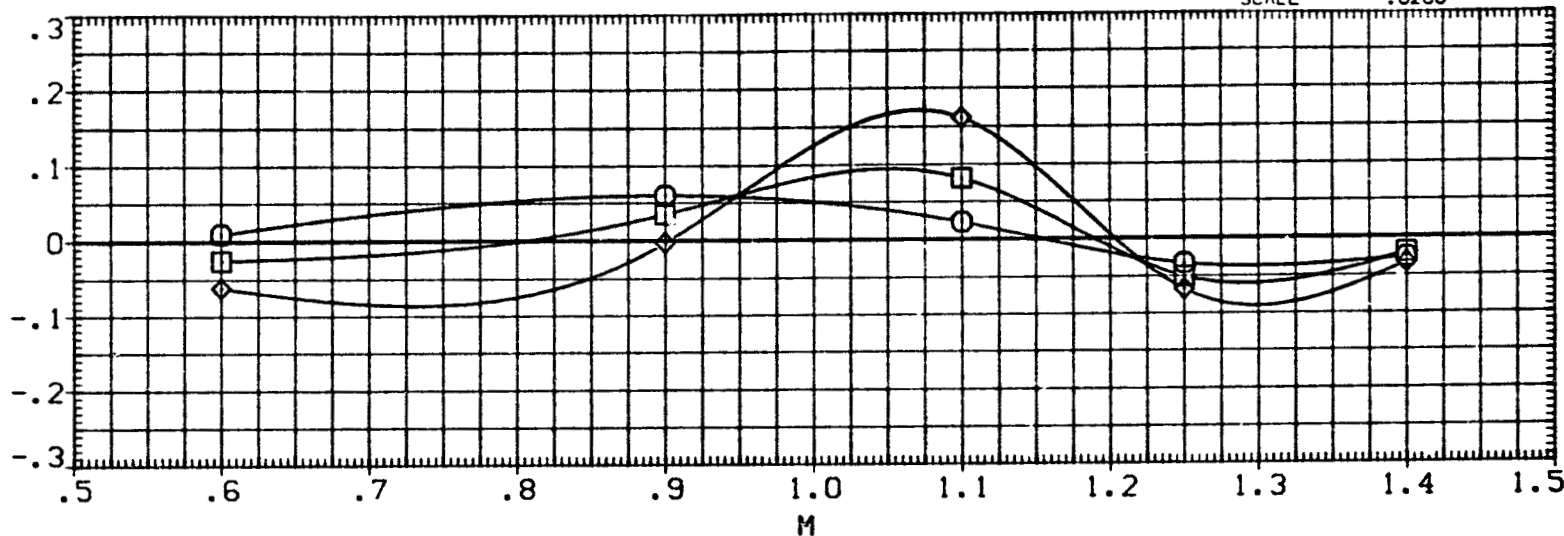
(CE4W28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	CE4W28	CE4W29	CE4W30	CE4W31	CE4W32	MACH
○	-4.000			.000			.000	.600		.900		
□	.000			.000			3.400	1.100		1.250		
◇	4.000							1.400				

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP29AV



CP30AV

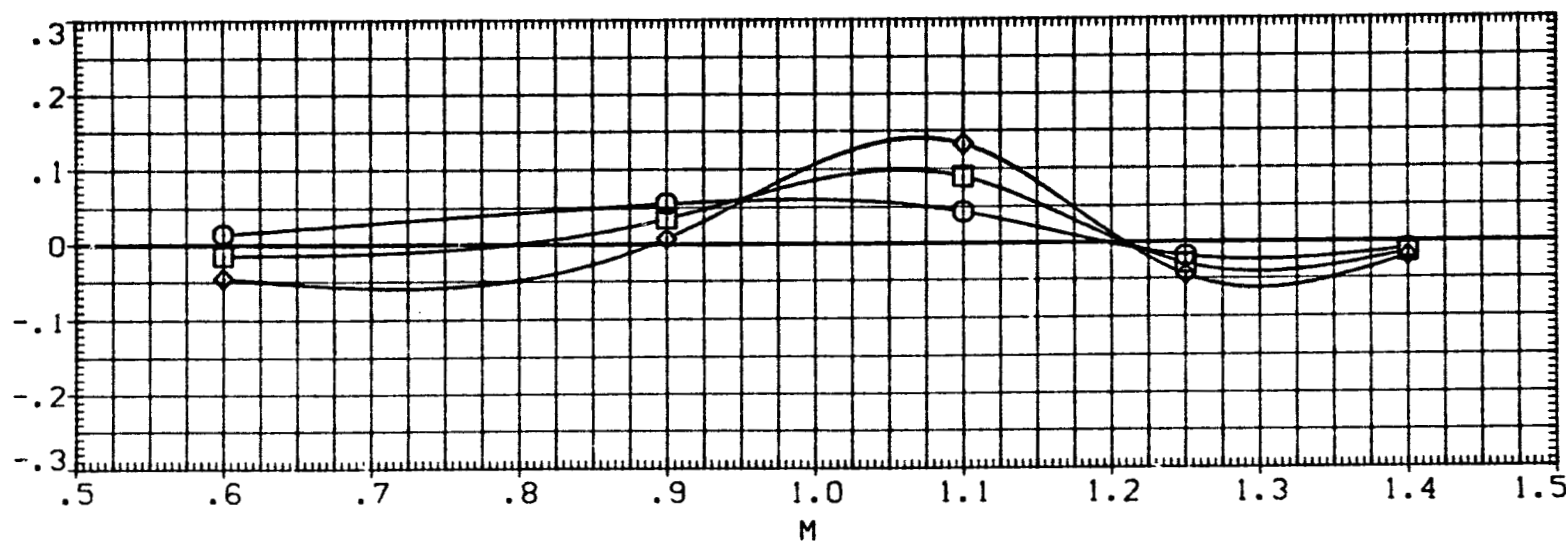


FIG. 128 AVERAGE ORB VENT PRESSURES

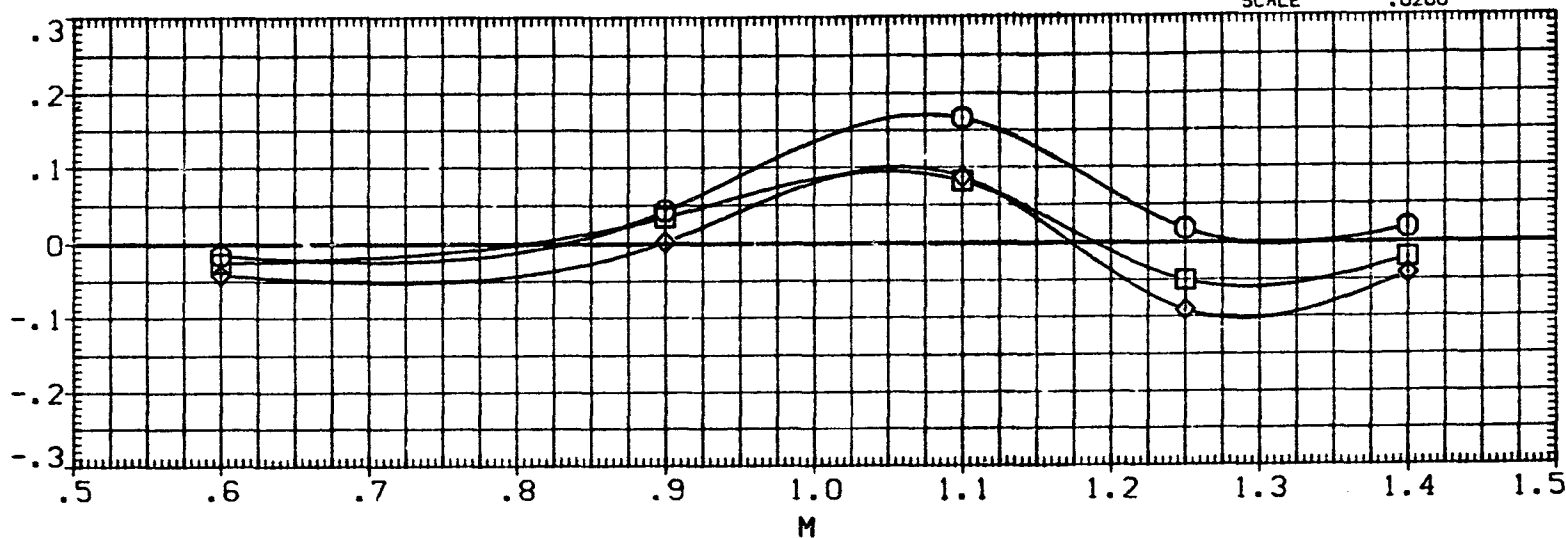
(CE4V28) ARC 11-023 IASO OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	ALPHA	ELV-IB	ELV-OB	ELV-IB	ELV-OB	ELV-IB	ELV-OB	ELV-IB	ELV-OB
○	-4.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
□	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
◇	4.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP29AV



CP30AV

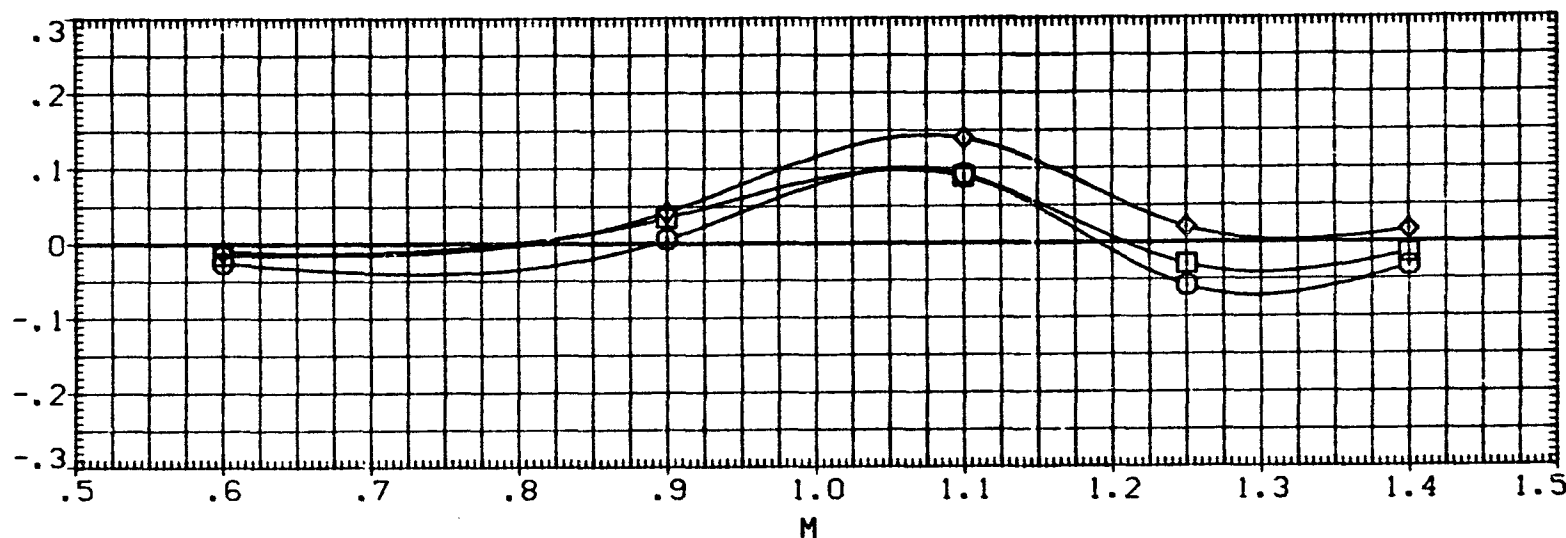


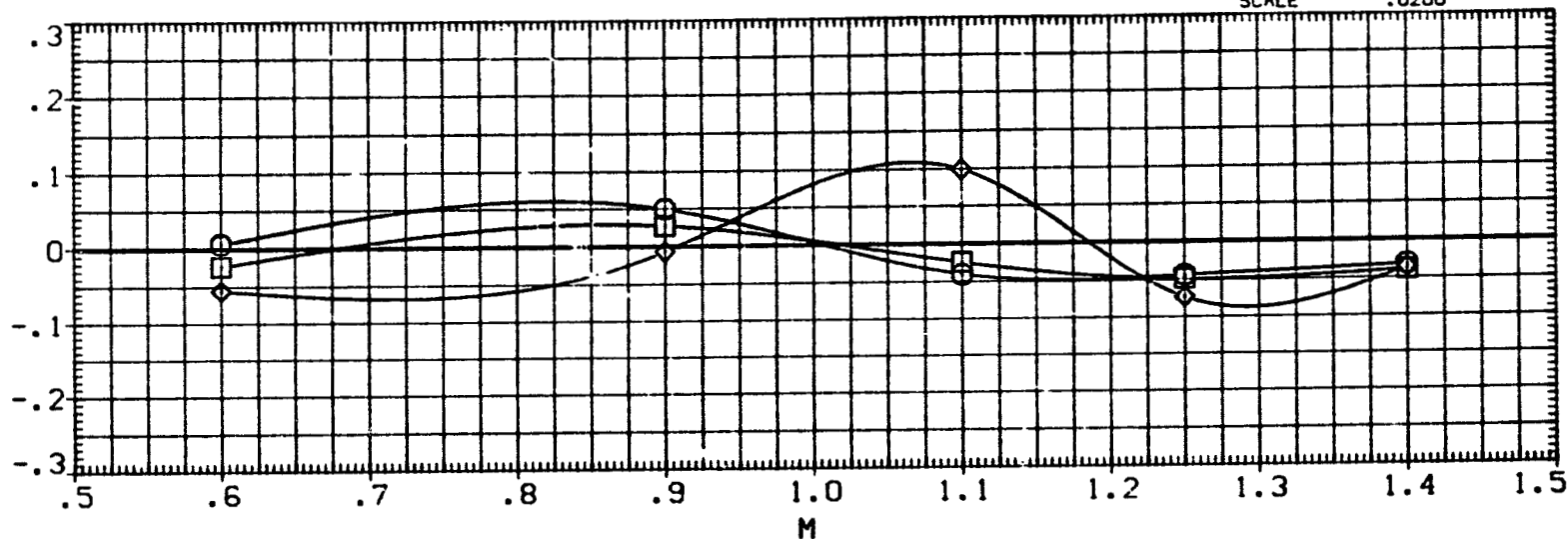
FIG. 128 AVERAGE ORB VENT PRESSURES

(HE4W28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	DATASET	MACH	DATASET	MACH
◇	-4.000			.000			HE4W28	.600	HE4W29	.900
□	.000			.000			HE4W30	1.100	HE4W31	1.250
◇	4.000			.000			HE4W32	1.400		

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP21AV



CP22AV

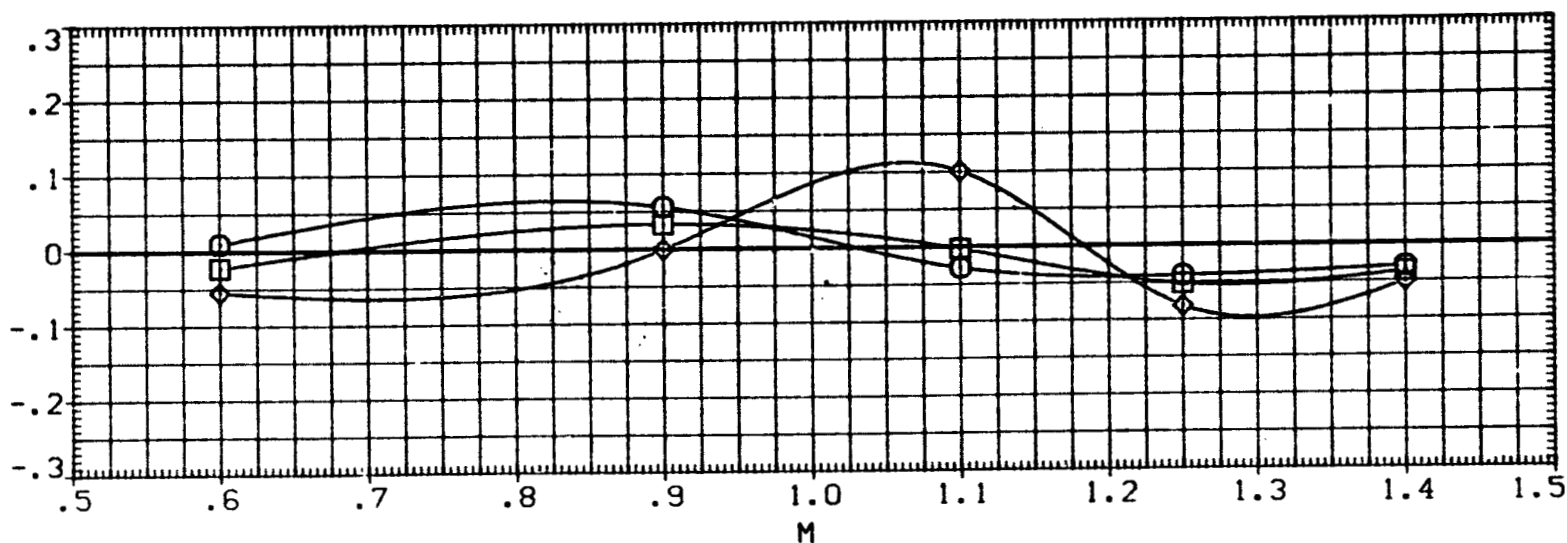


FIG. 128 AVERAGE ORB VENT PRESSURES

(HE4V28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH	DATASET	MACH
○	-4.000	ALPHA .000	HE4V28	.600	HE4V29	.900
□	.000	ELV-OB .000	HE4V30	1.100	HE4V31	1.250
◇	4.000	RN/L 3.400	HE4V32	1.400		

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

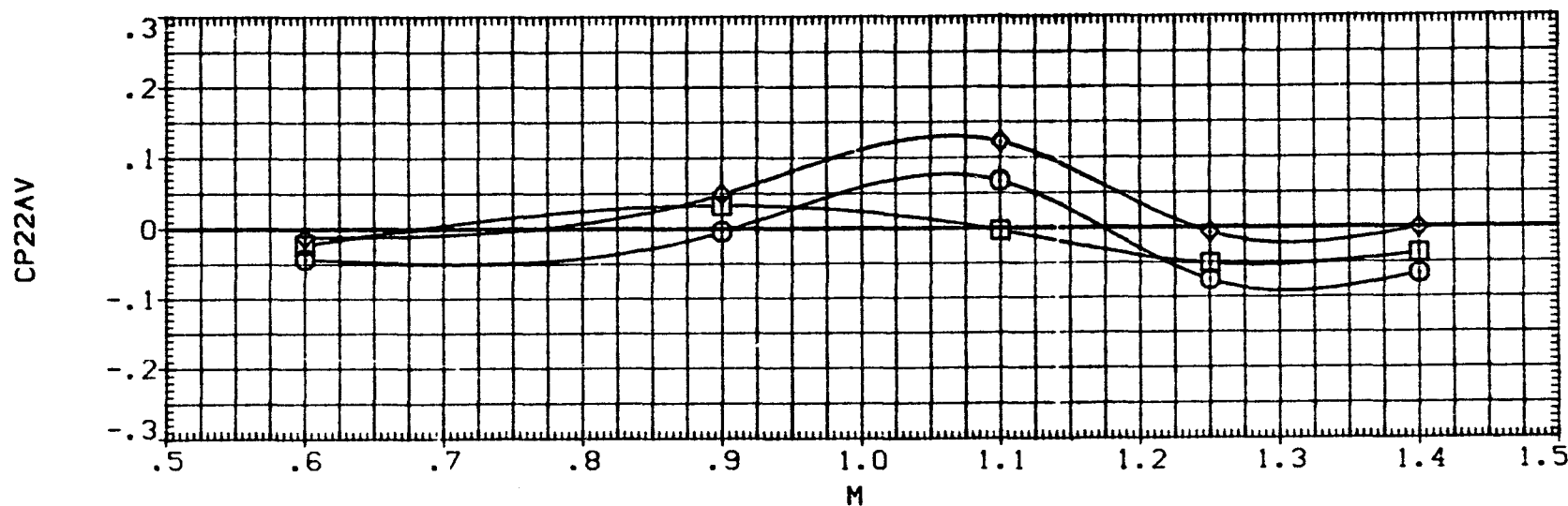
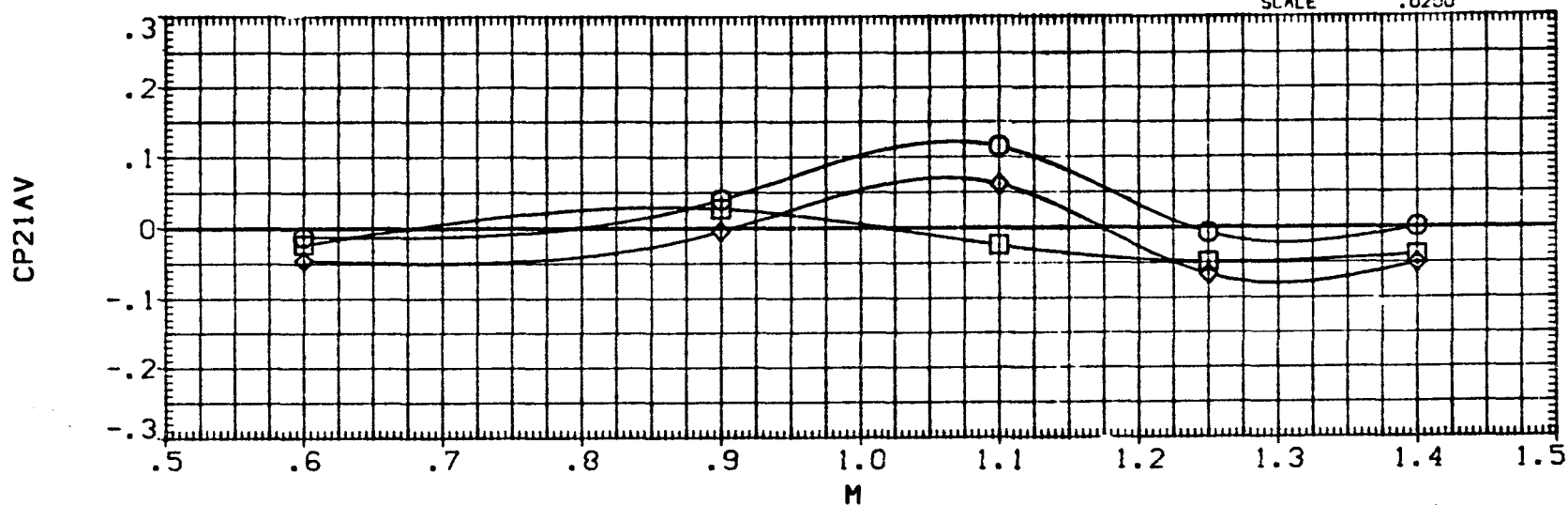


FIG. 128 AVERAGE ORB VENT PRESSURES

(JE4W28) ARC 11-023 1A80 0TS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	3.400	DATASET	MACH	DATASET	MACH
◇	-4.000			.000				JE4W28	.600	JE4W29	.900
□	.000			.000				JE4W30	1.100	JE4W31	1.250
◇	4.000							JE4W32	1.400		

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

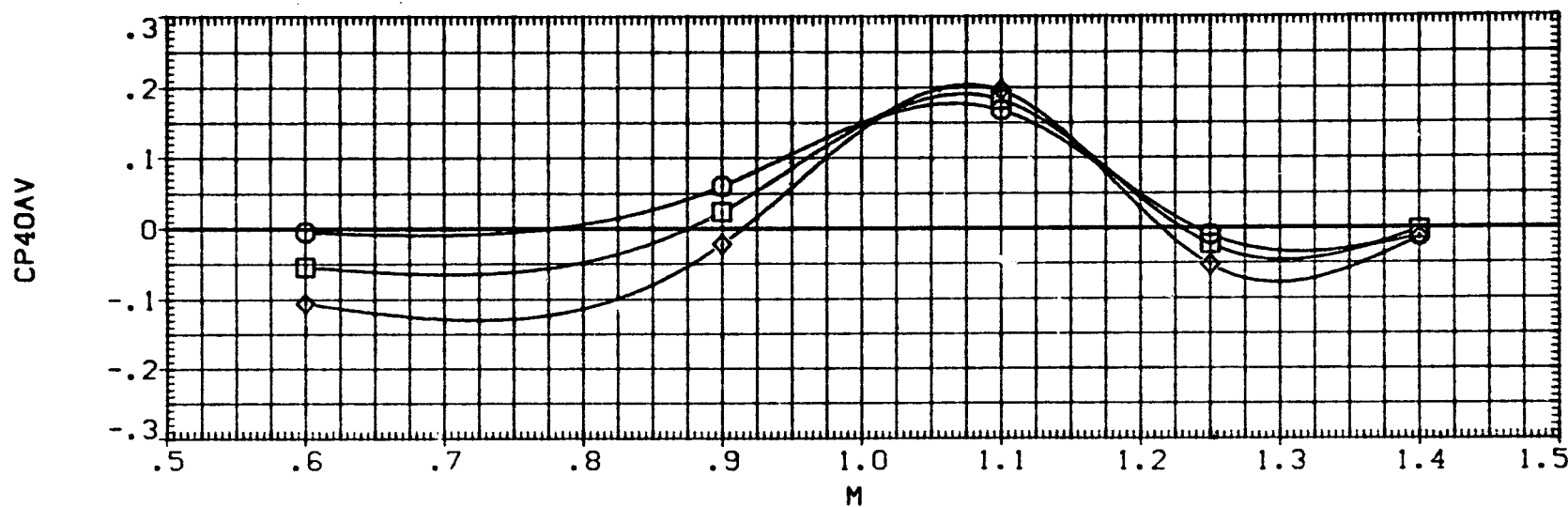
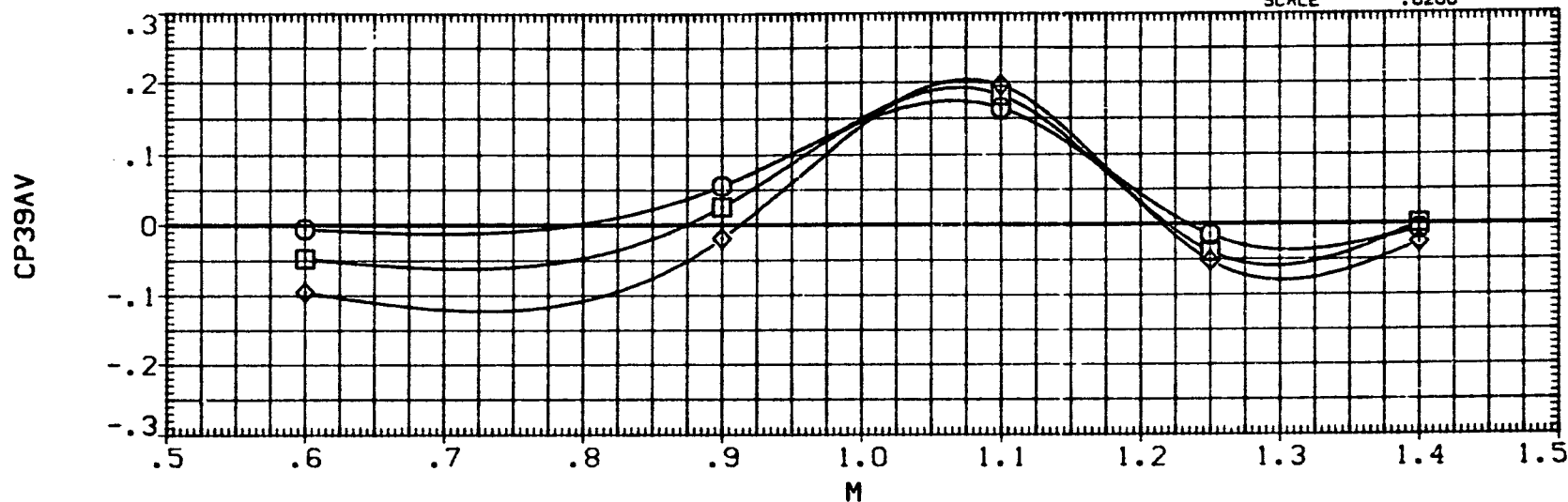


FIG. 128 AVERAGE ORB VENT PRESSURES

(JE4V28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES			DATASET	MACH	DATASET	MACH	
◇	-4.000	ALPHA	.000	ELV-1B	.000	JE4V28	.600	JE4V29	.900
□	.000	ELV-0B	.000	RN/L	3.400	JE4V30	1.100	JE4V31	1.250
◇	4.000					JE4V32	1.400		

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

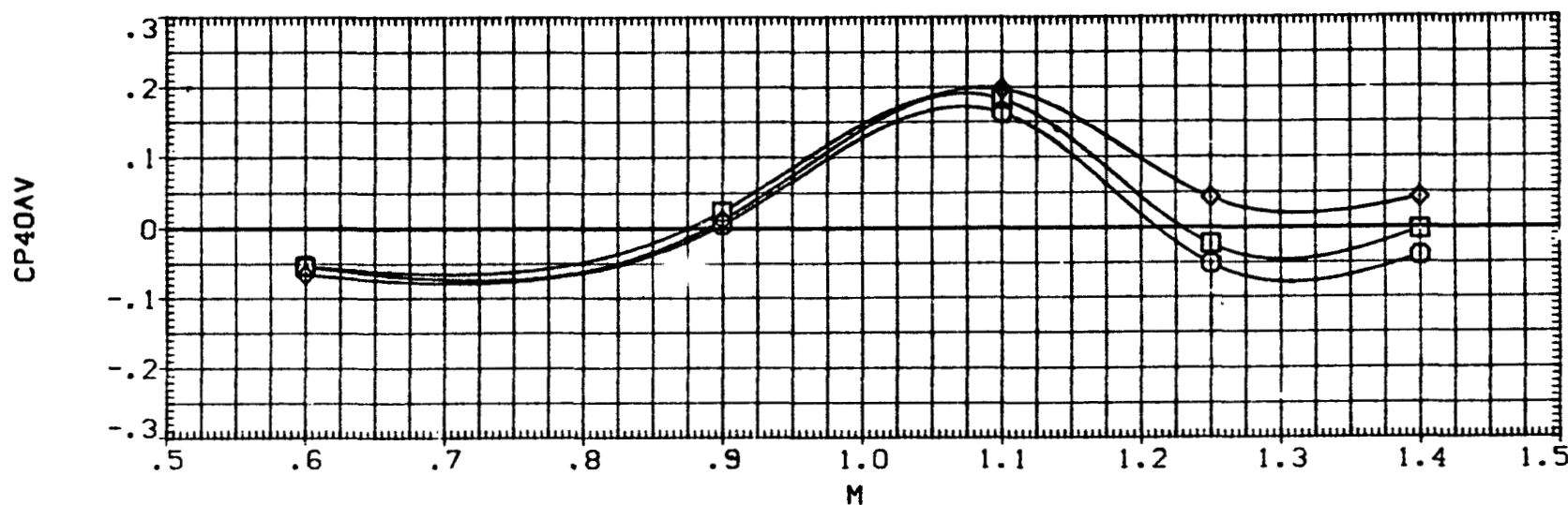
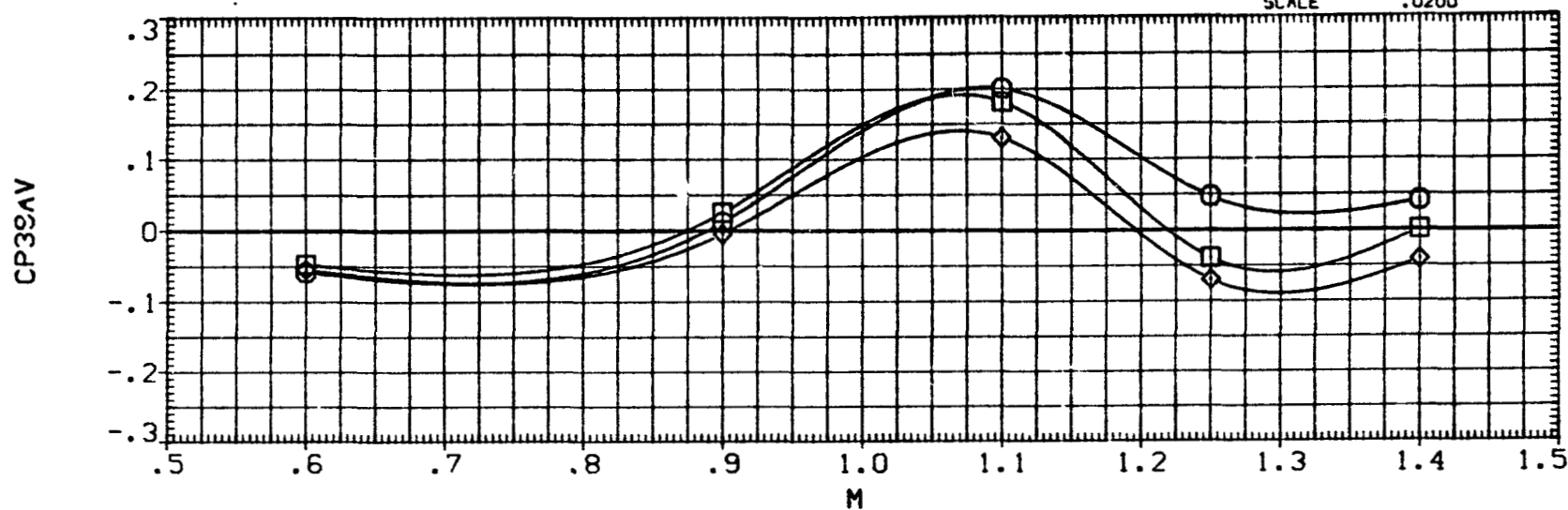


FIG. 128 AVERAGE ORB VENT PRESSURES

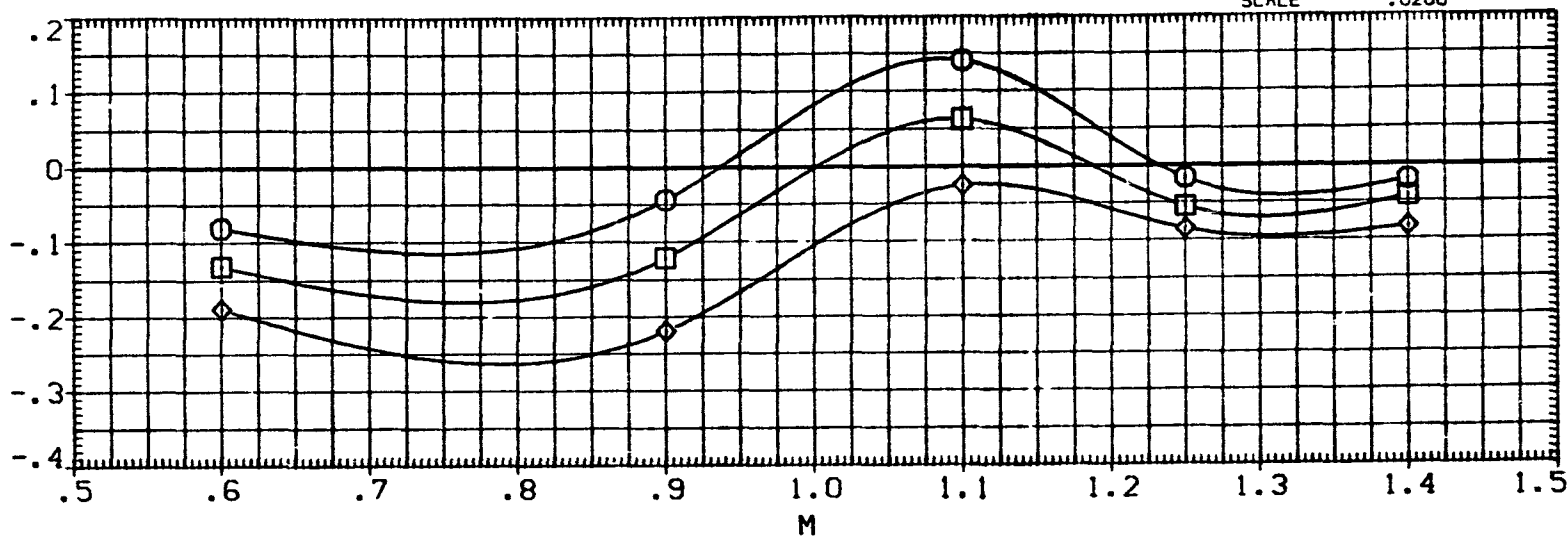
(KE4W28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	3.400	KE4W28	KE4W30	KE4W32	MACH	.600	1.100	1.400	KE4W29	KE4W31	MACH	.900	1.250
◇	-4.000			.000															
□	.000			.000															
○	4.000			.000															

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
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YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP47AV



CP48AV

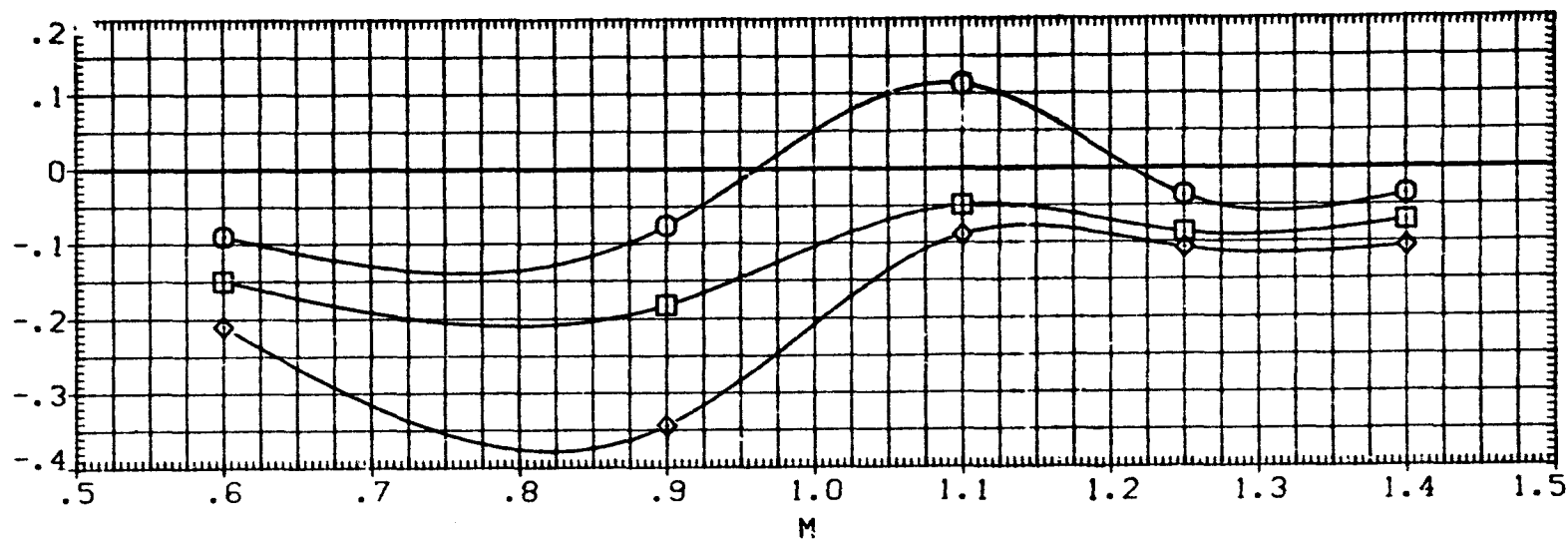


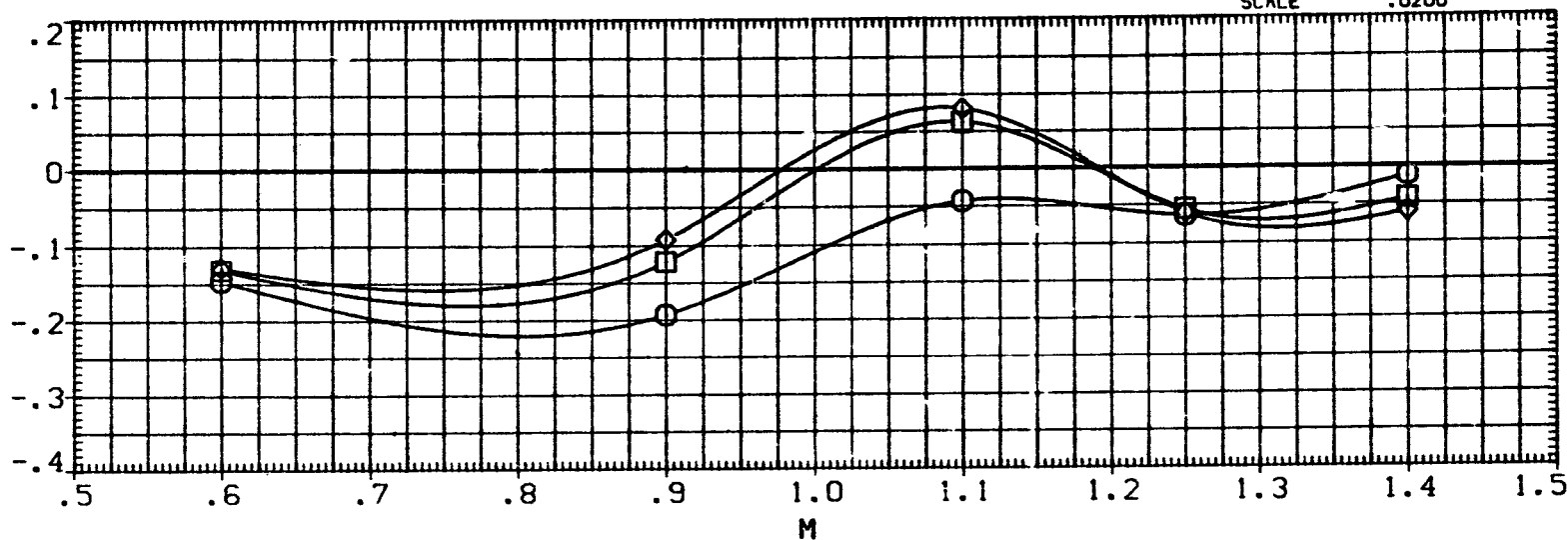
FIG. 128 AVERAGE ORB VENT PRESSURES

(KE4V28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-1B .000	KE4V28	.600
□	.000	ELV-0B .000 RN/L 3.400	KE4V30	1.100
○	4.000		KE4V32	1.400

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	1290.3000 IN.
BREF	1290.3000 IN.
XMRP	.0000 IN.
YMRP	.0000 IN.
ZMRP	.0000 IN.
SCALE	.0200

CP47AV



CP48AV

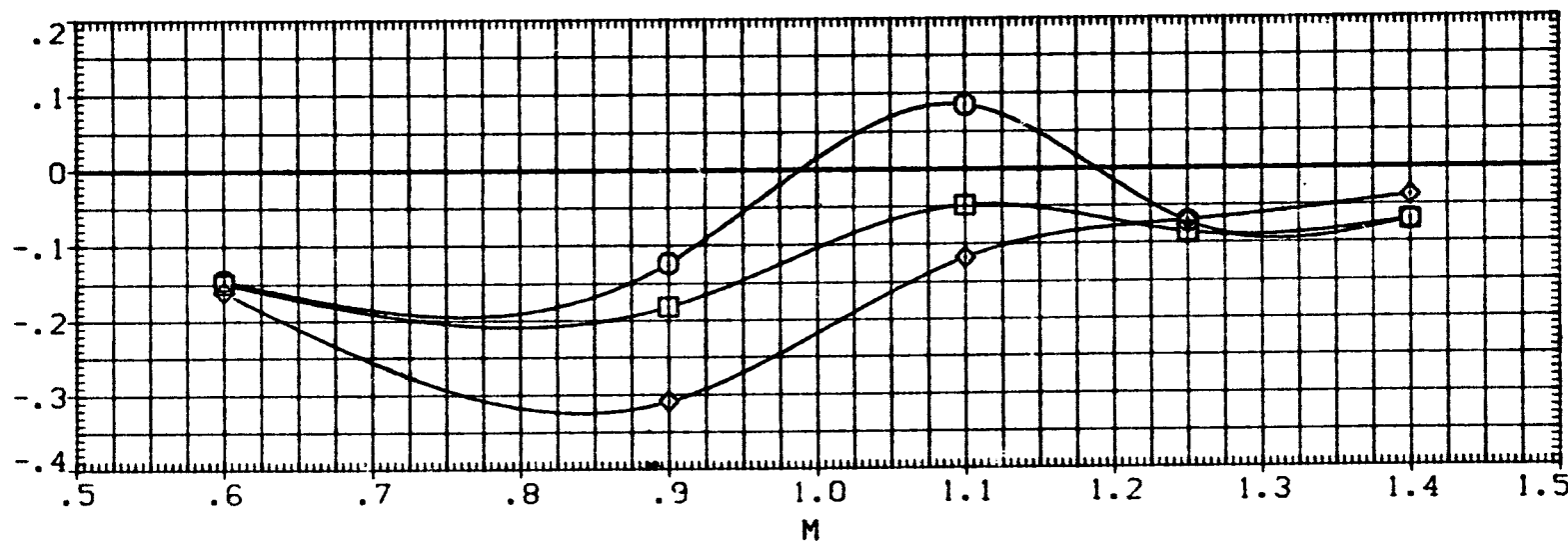


FIG. 128 AVERAGE ORB VENT PRESSURES

(DE4W28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000		.000 ELV-1B	DE4W28	.600
□	.000	ELV-0B	.000 RN/L	DE4W30	1.100
◇	4.000			DE4W32	1.400

REFERENCE INFORMATION

	VALUE	UNIT
SREF	2690.0000	IN.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

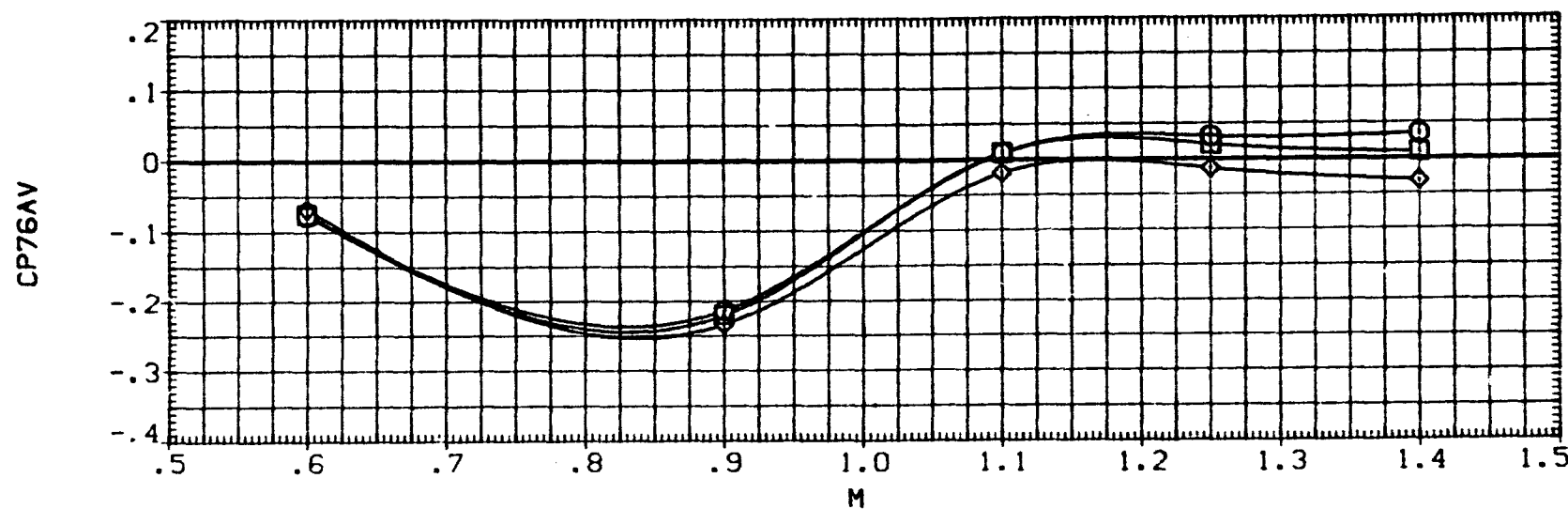
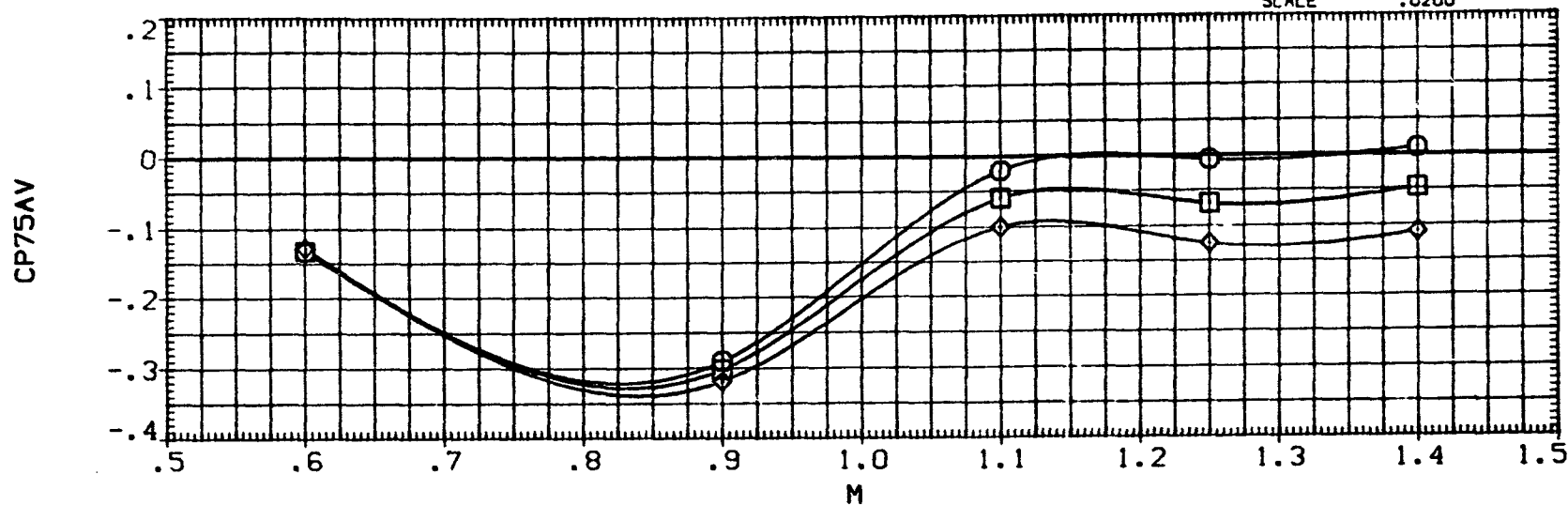


FIG. 128 AVERAGE ORB VENT PRESSURES

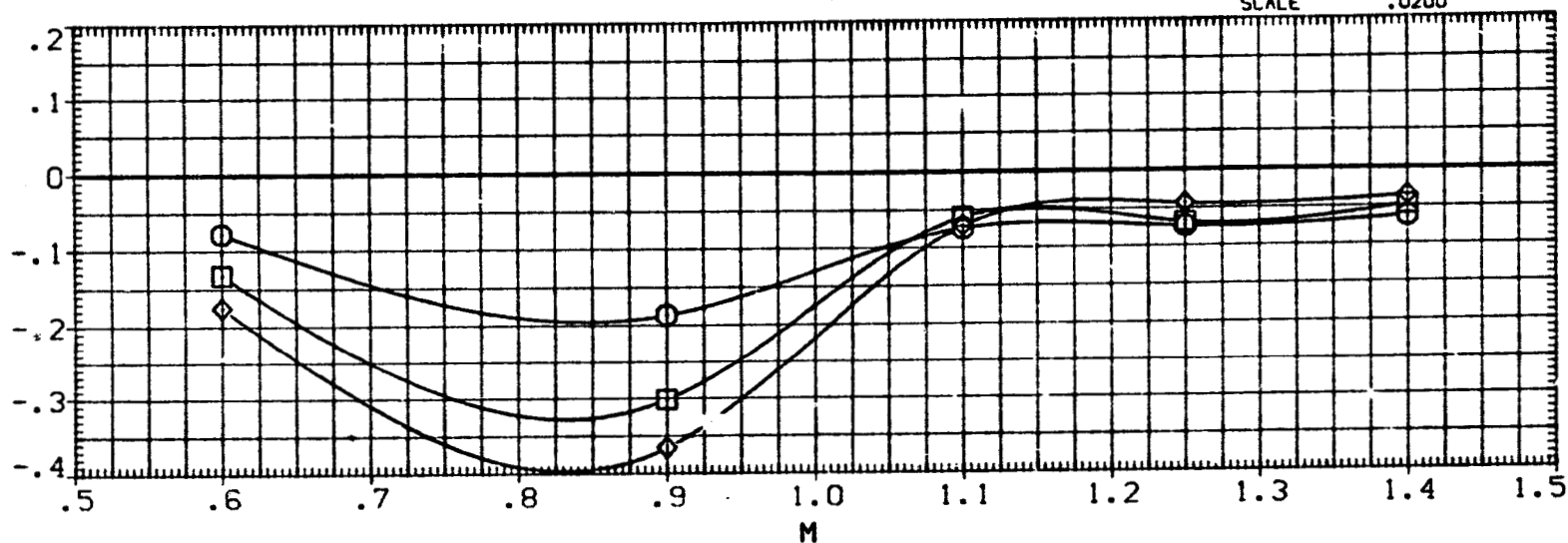
(DE4V28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	ALPHA	PARAMETRIC VALUES	ELV-1B	ELV-OB	ELV-1B	ELV-OB	ELV-1B	ELV-OB	ELV-1B	ELV-OB
◇	-4.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
□	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
○	4.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

REFERENCE INFORMATION

SYMBOL	VALUE	UNIT
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP75AV



CP76AV

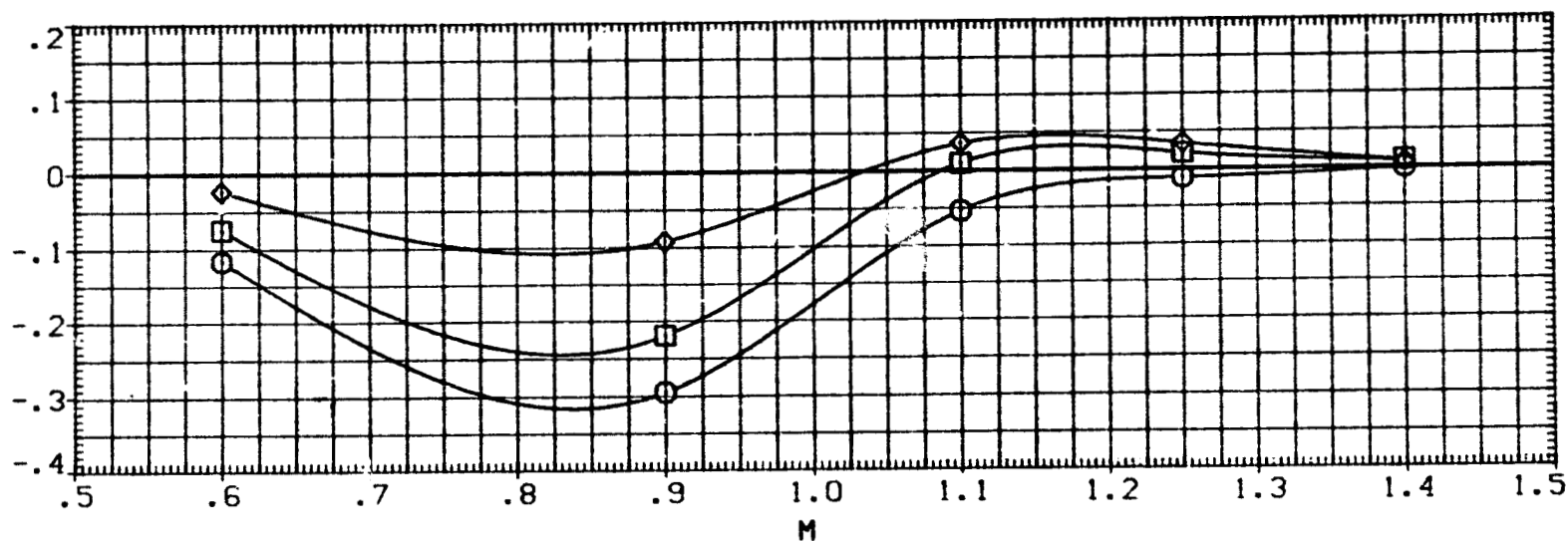


FIG. 128 AVERAGE ORB VENT PRESSURES

(LE4W28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES			DATASET	MACH	DATASET	MACH
○	-4.000		.000	ELV-1B	.000	LE4W28	.600	LE4W29	.900
□	.000	ELV-0B	.000	RN/L	3.400	LE4W30	1.100	LE4W31	1.250
◇	4.000					LE4W32	1.400		

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

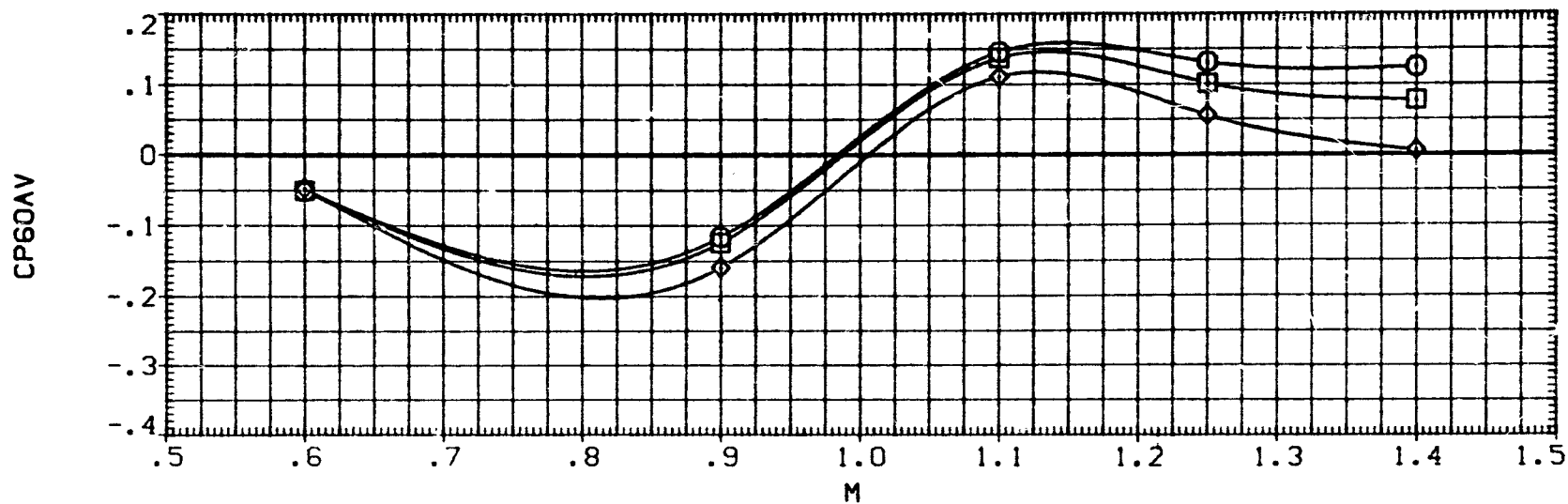
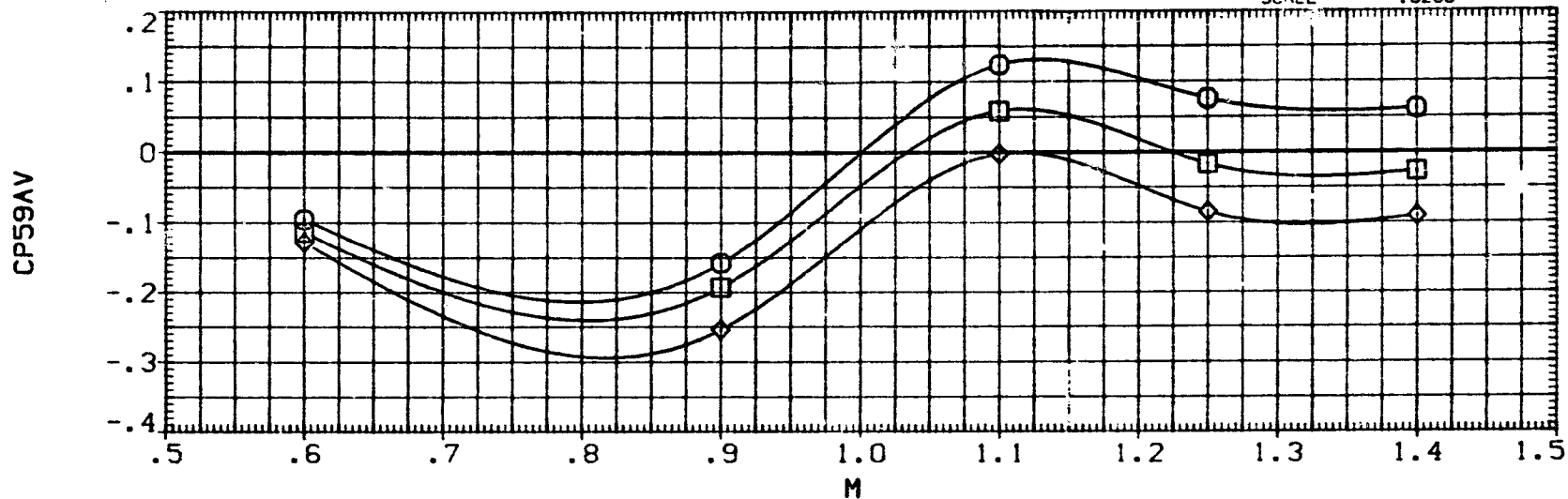


FIG. 128 AVERAGE ORB VENT PRESSURES

(LE4V28) ARC 11-023 1A80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	LE4V28	.600
□	.000	ELV-OB .000 RN/L 3.400	LE4V30	1.100
◇	4.000		LE4V32	1.400

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

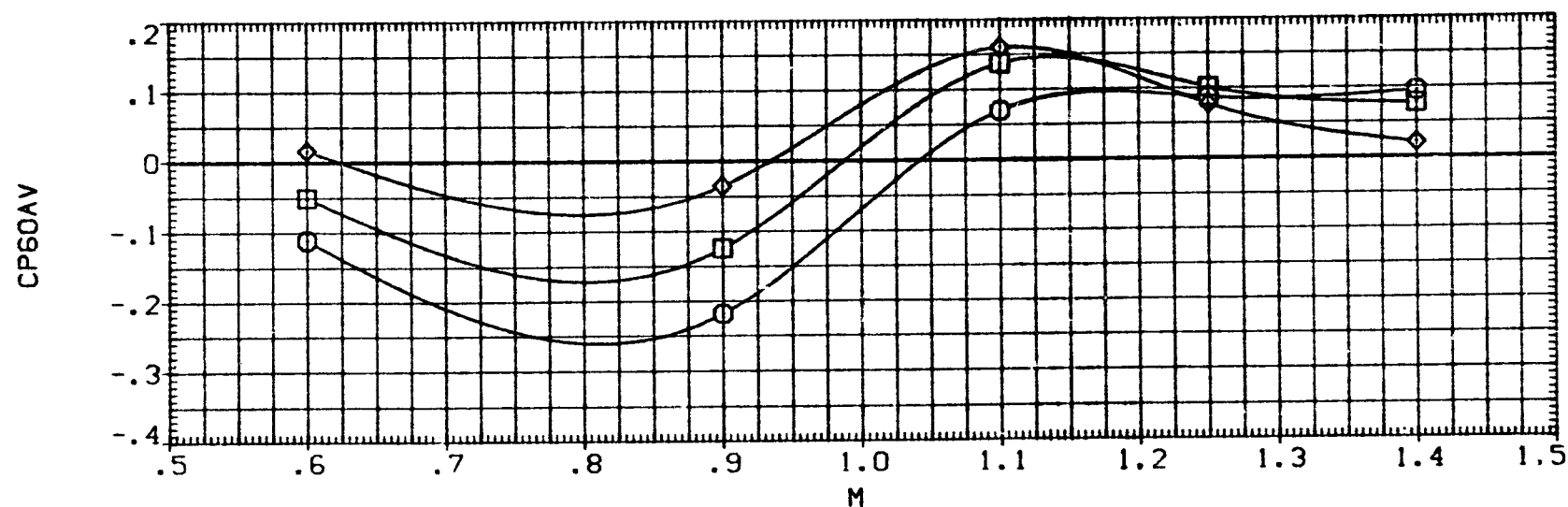
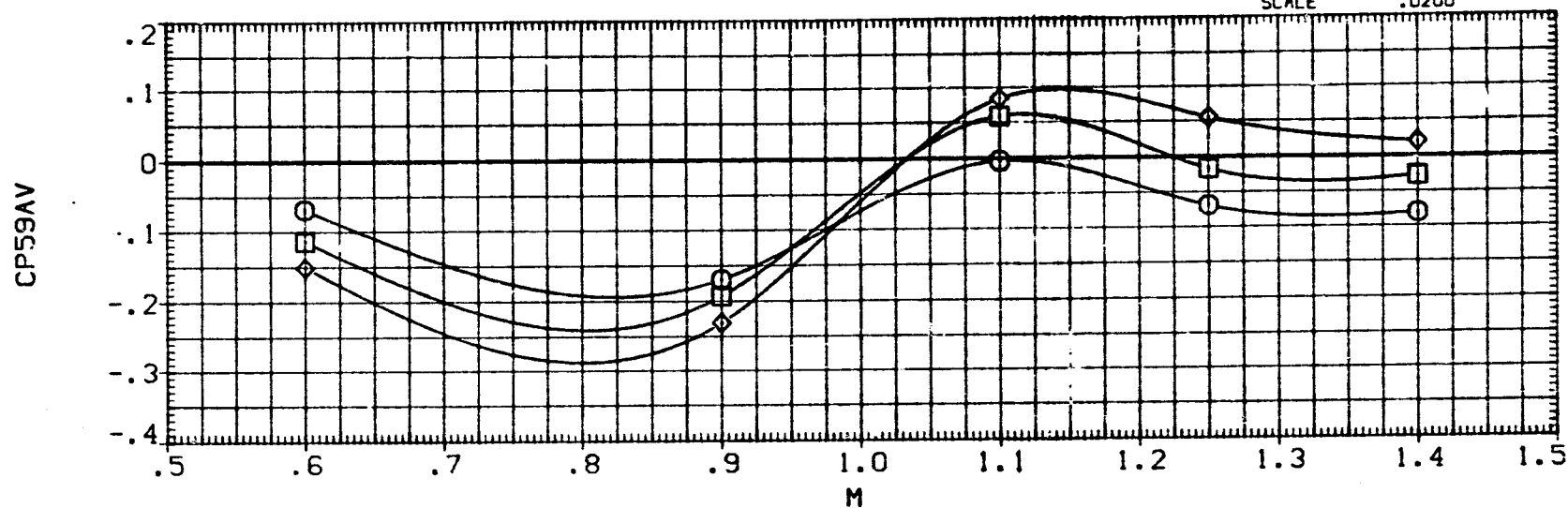


FIG. 128 AVERAGE ORB VENT PRESSURES

(ME4W28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	DATASET	MACH	DATASET	MACH
○	-4.000		.000 ELV-IB	ME4W28	.600	ME4W29	.900
□	.000	ELV-OB	.000 RN/L	ME4W30	1.100	ME4W31	1.250
◇	4.000			ME4W32	1.400		

REFERENCE INFORMATION		
SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

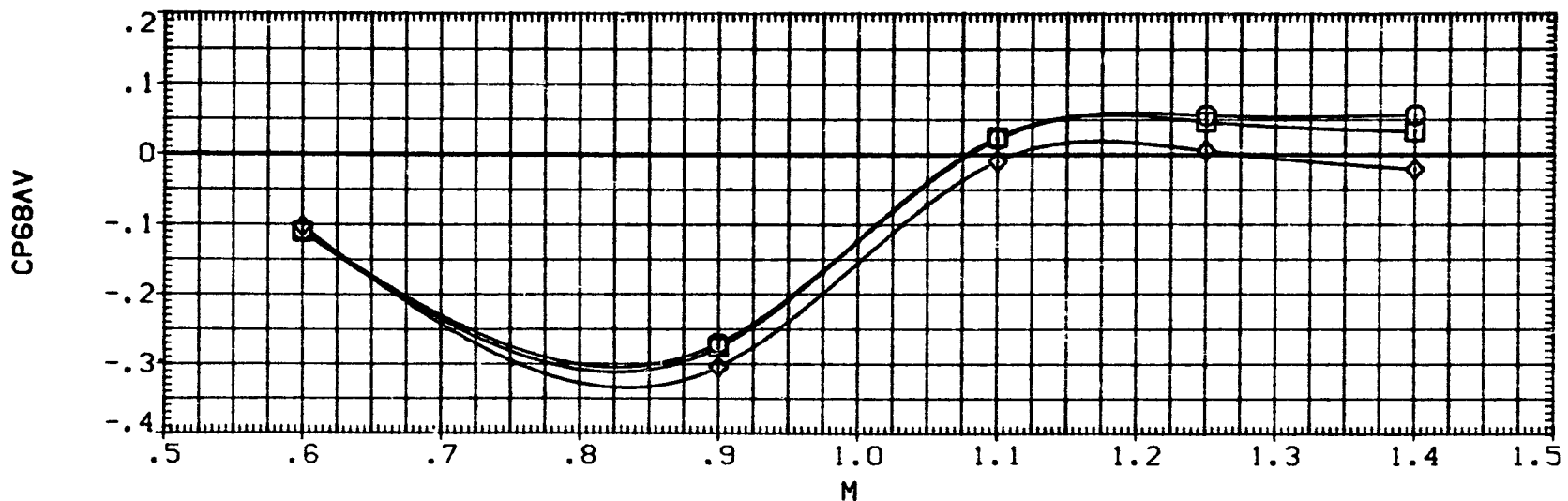
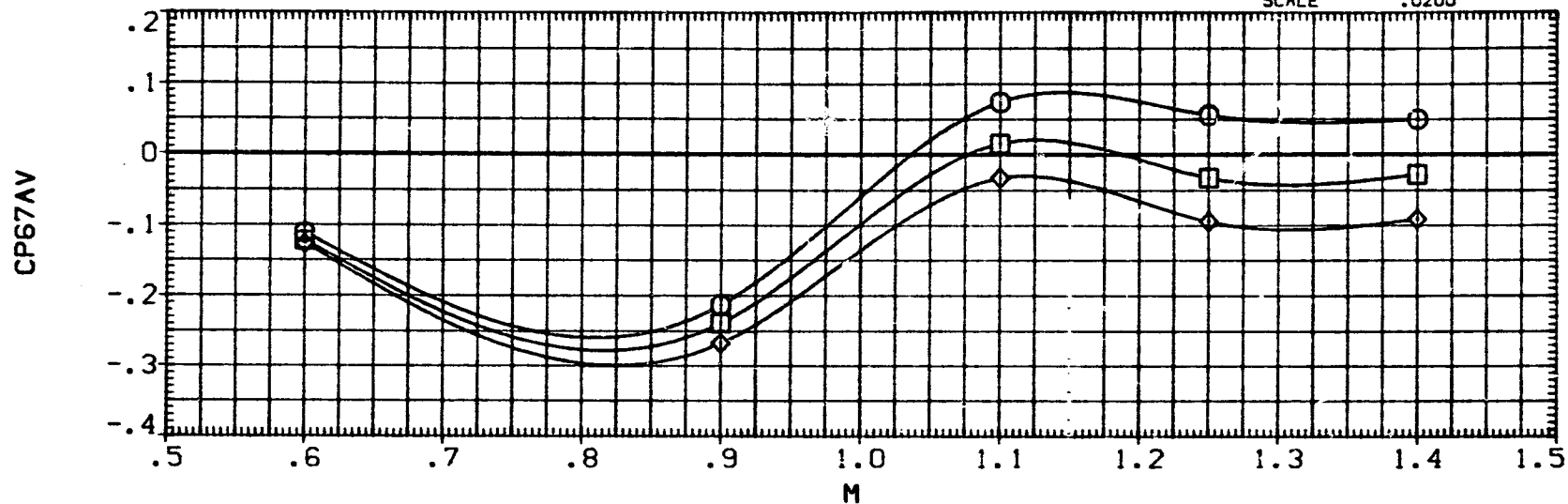


FIG. 128 AVERAGE ORB VENT PRESSURES

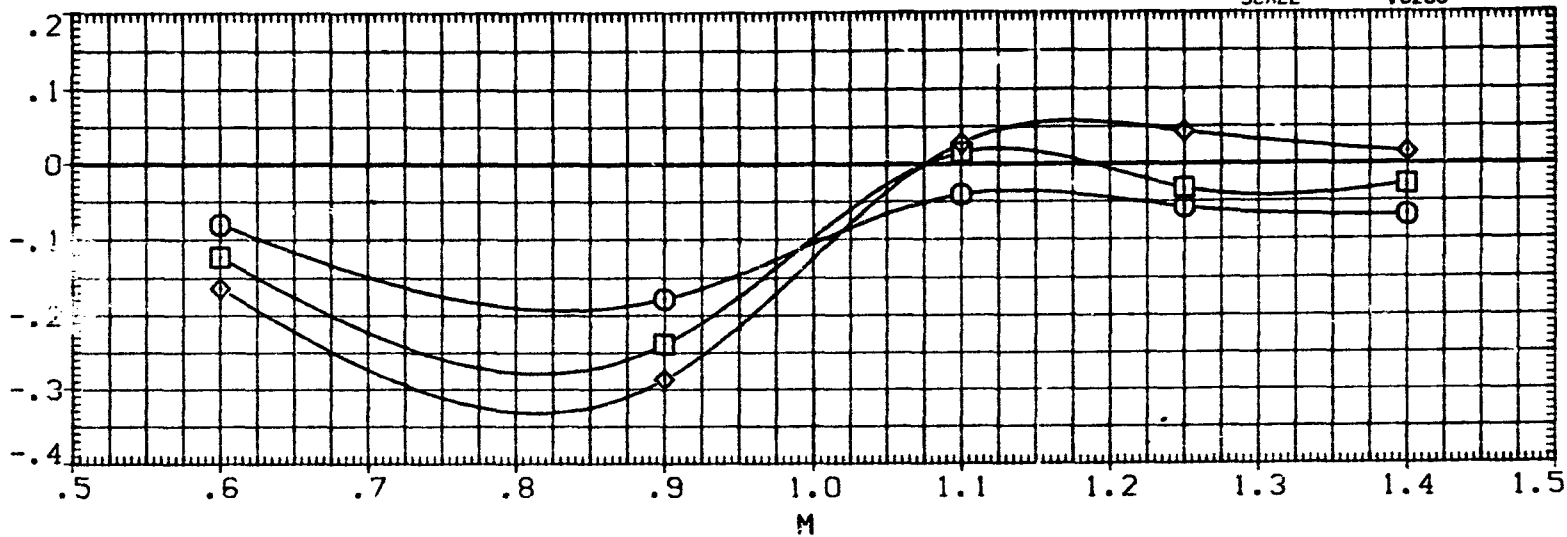
(ME4V28) ARC 11-023 IA80 OTS (SRB OFF) (SSME OFF)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	ME4V28	.600
□	.000	ELV-0B .000 RN/L 3.400	ME4V30	1.100
◇	4.000		ME4V32	1.400

REFERENCE INFORMATION

	2690.0000	SQ.FT.
SREF	1290.3000	IN.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

CP67AV



CP68AV

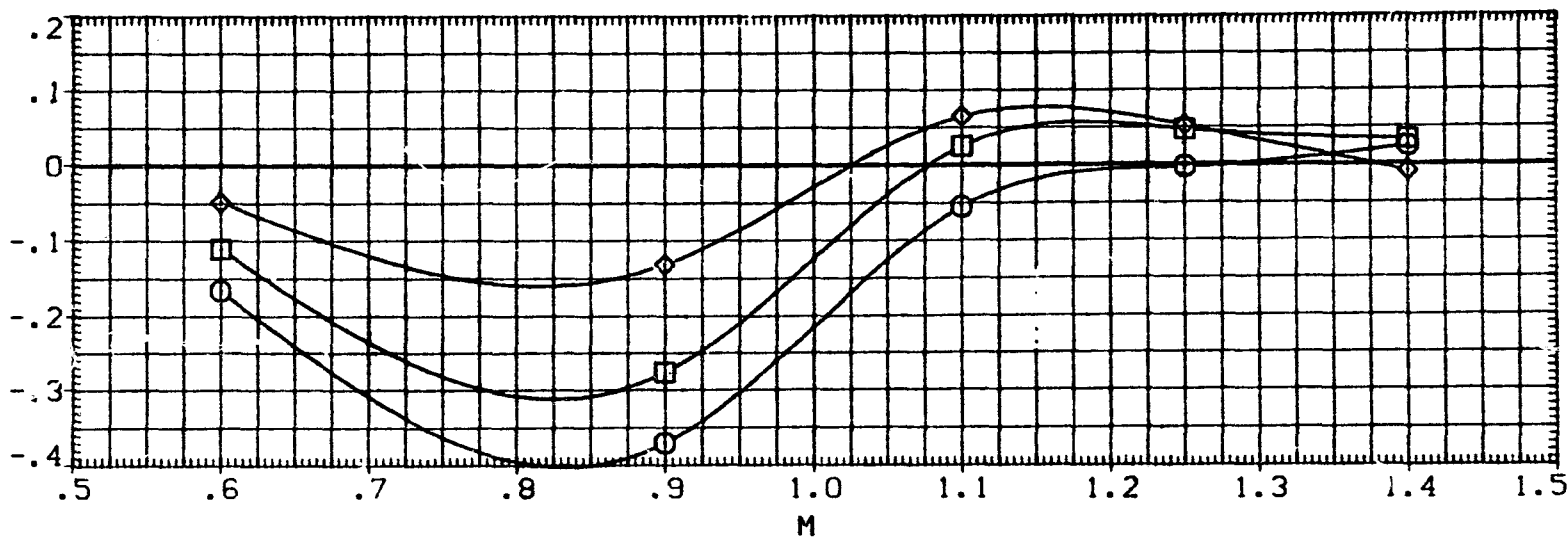


FIG. 128 AVERAGE ORB VENT PRESSURES

(BE4Q20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-IB	ELV-OB	RN/L	DATASET	MACH	DATASET	MACH
◇	-4.000		.000	.000			BE4Q20	.600	BE4Q21	.900
□	.000		.000				BE4Q22	1.100	BE4Q23	1.250
◇	4.000						BE4Q24	1.400		

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP12A

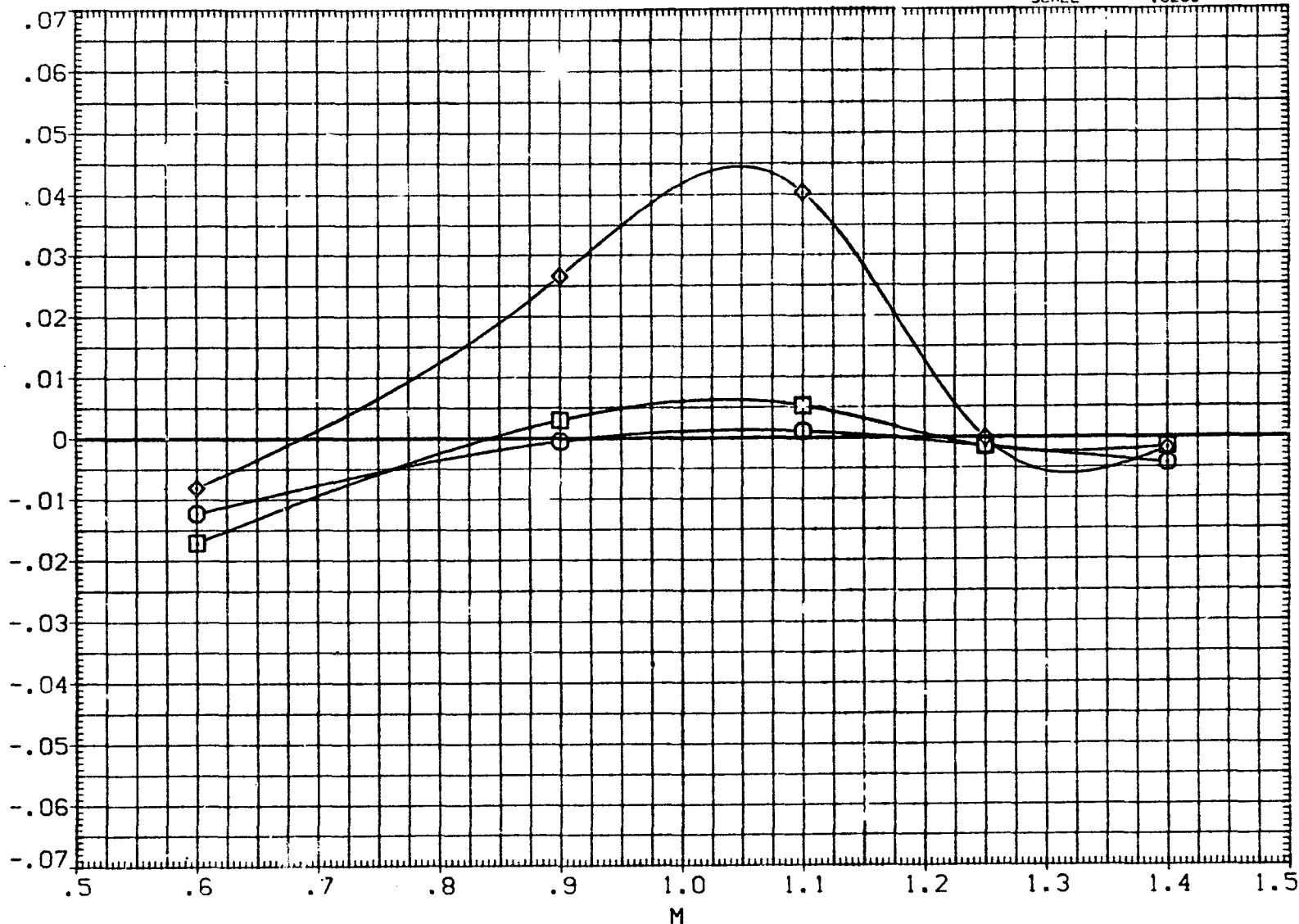


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(BE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES			DATASET	MACH	
◇ □	-4.000	ALPHA	.000	ELV-1B	.000	BE4P20	.600
	.000	ELV-OB	.000	RN/L	3.400	BE4P22	1.100
	4.000					BE4P24	1.400

REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XM RP	.0000	IN.
YM RP	.0000	IN.
ZM RP	.0000	IN.
SCALE	.0200	

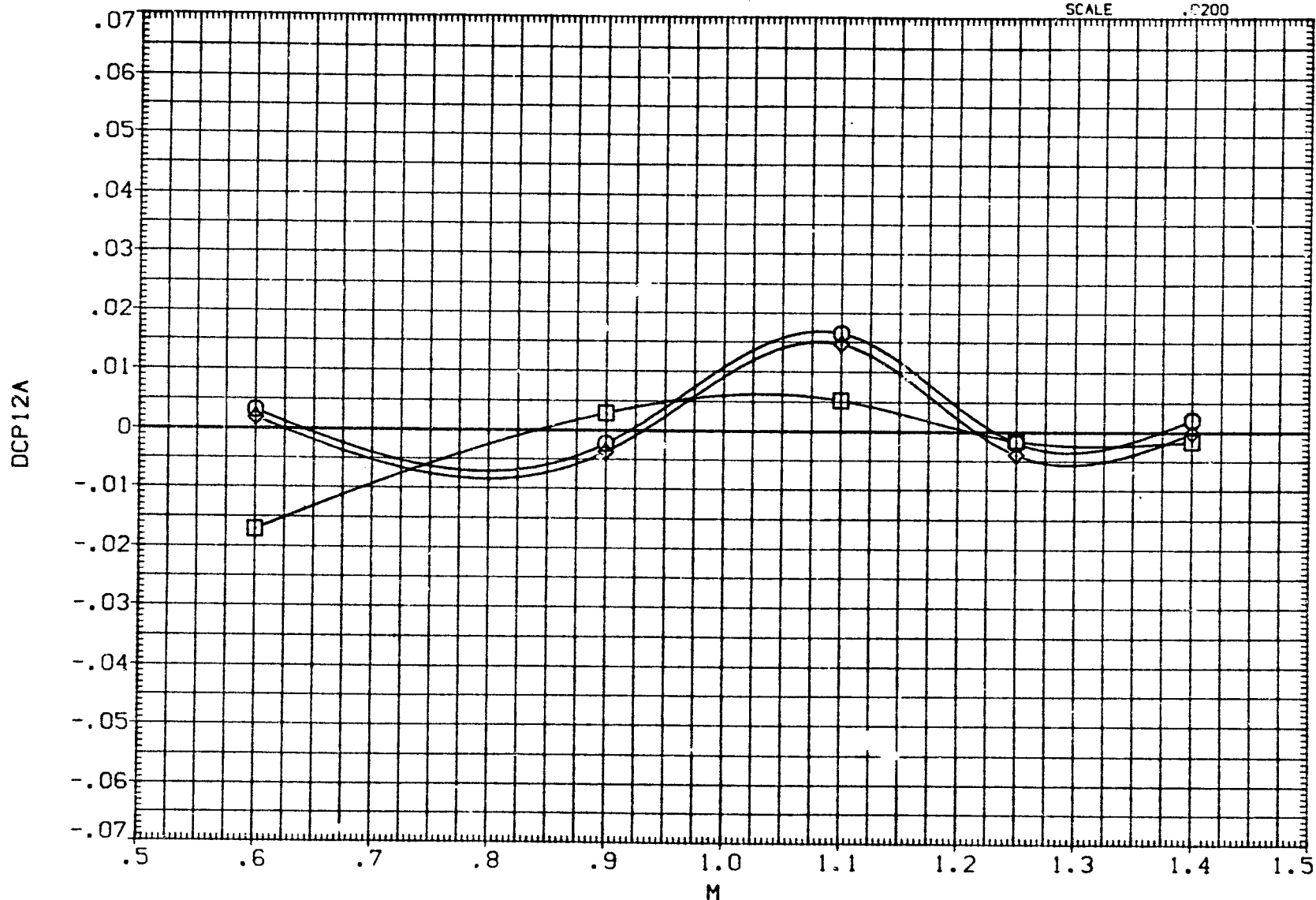


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(IE4Q20) ARC 11-023 IA80 OTS (SRB NOM) (SSME NOM)

SYMBOL	ALPHA	BETA	ELV-08	PARAMETRIC VALUES	ELV-1B	RN/L	DATASET	MACH
○	-4.000			.000	.000	3.400	IE4Q20	.600
□	.000			.000	.000		IE4Q22	1.100
◇	4.000			.000	.000		IE4Q24	1.400

DATASET†	MACH
IE4Q21	.900
IE4Q23	1.250

REFERENCE INFORMATION		
.SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP13A

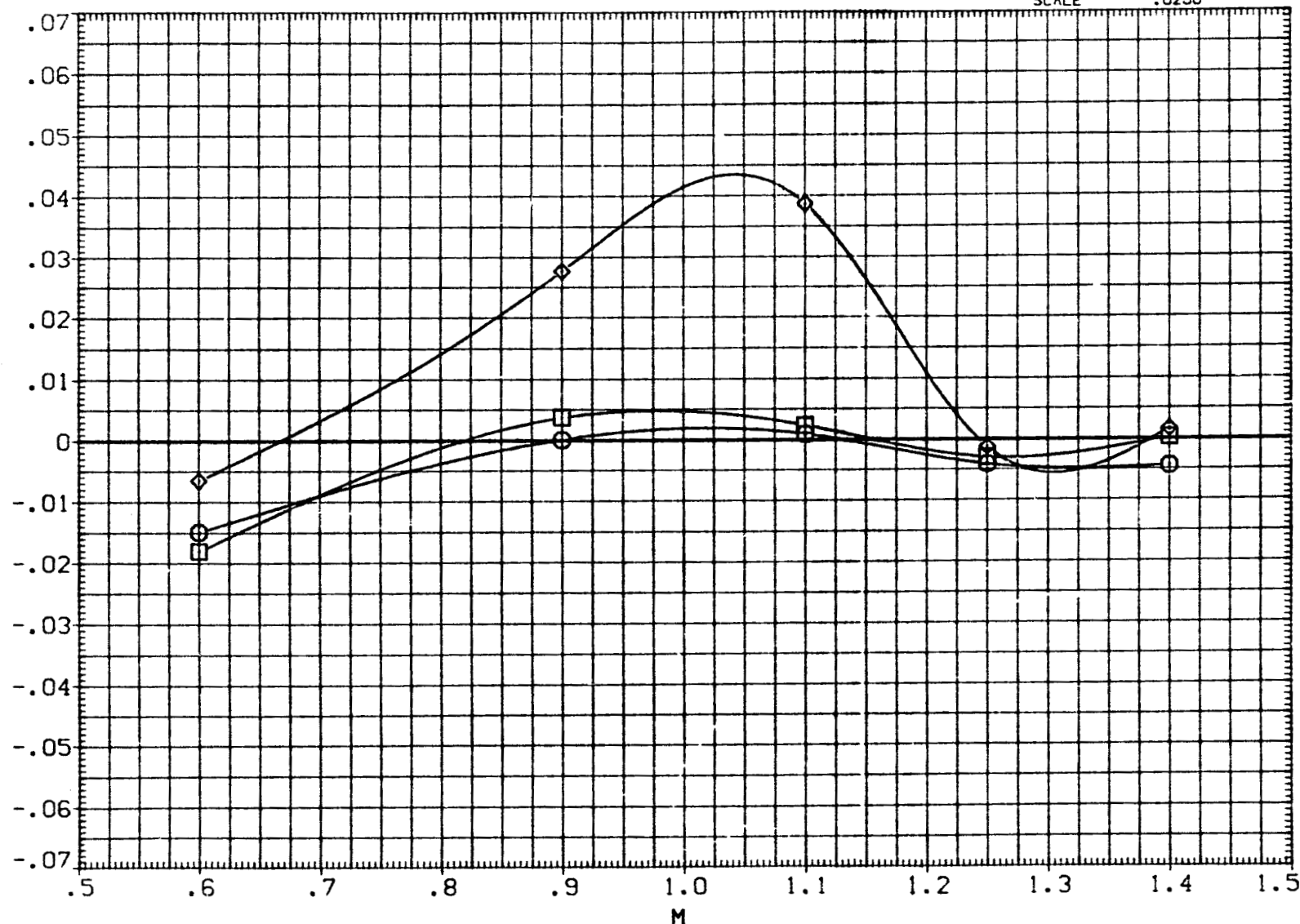


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(IE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA	IE4P20	.600
□	.000	ELV-OB	IE4P22	1.100
◇	4.000	ELV-IB	IE4P24	1.400
		RN/L		3.400

REFERENCE INFORMATION

	2690.0000	SQ.FT.
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

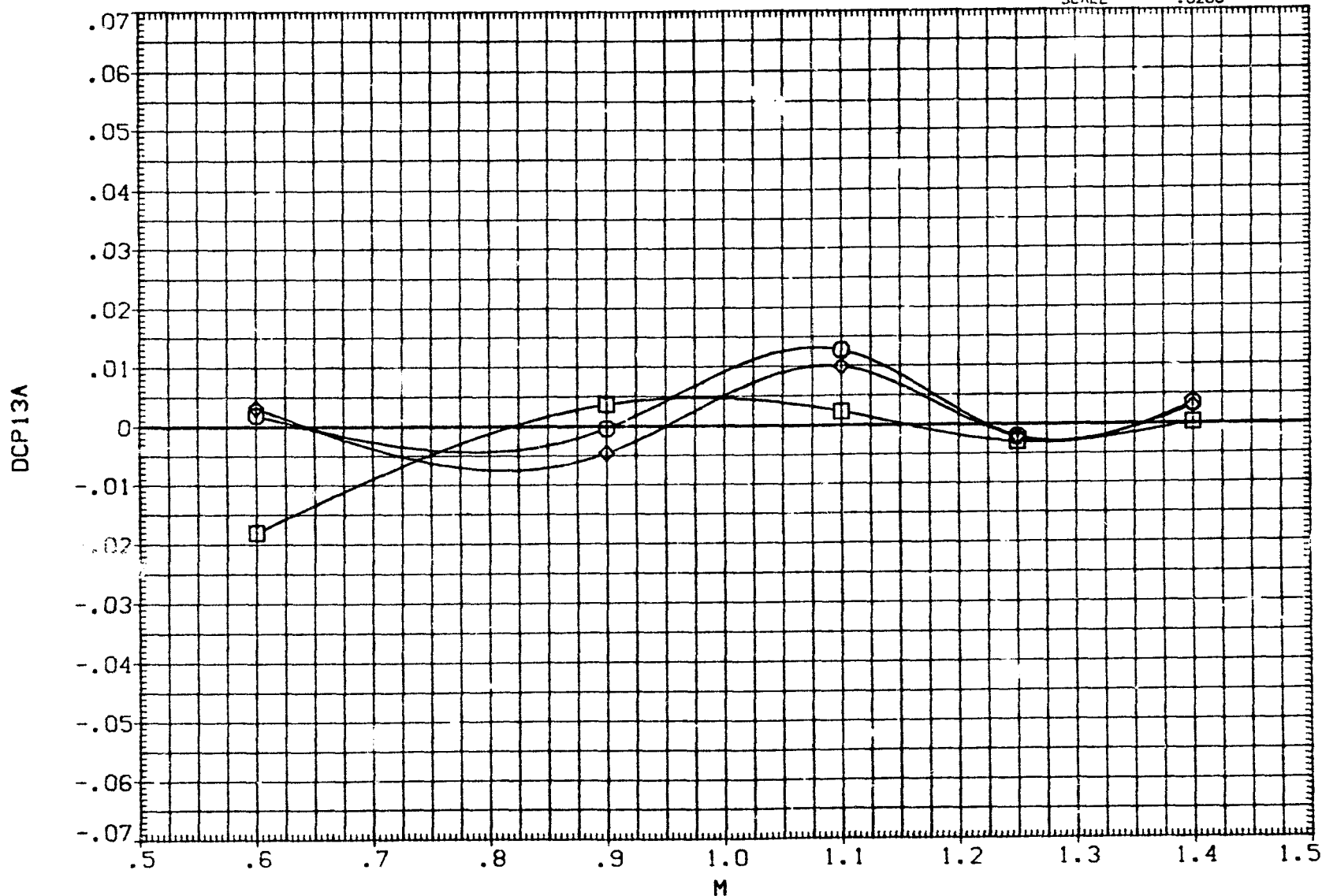


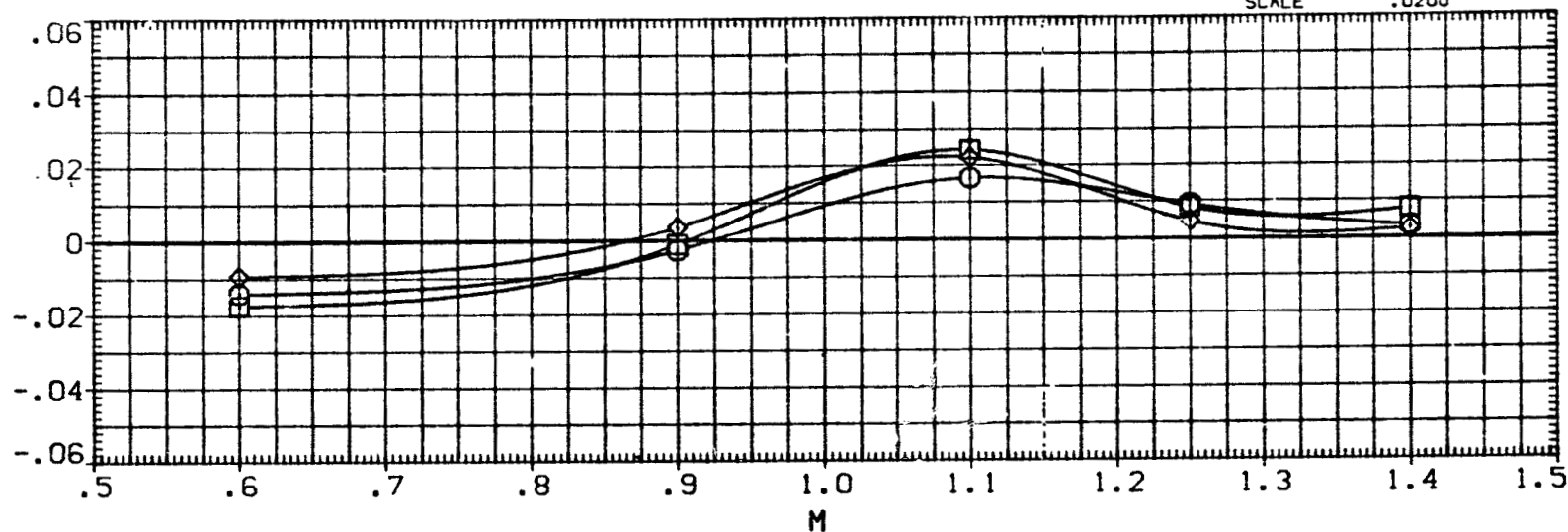
FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(CE4Q20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-IB	ELV-OB	RN/L	CE4Q20	CE4Q22	CE4Q24
◇	-4.000	.000	.000	.000	.000	3.400	.600	1.100	1.400
□	.000	.000	.000	.000	.000	.000	.000	.000	.000
○	4.000	.000	.000	.000	.000	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP29A



DCP30A

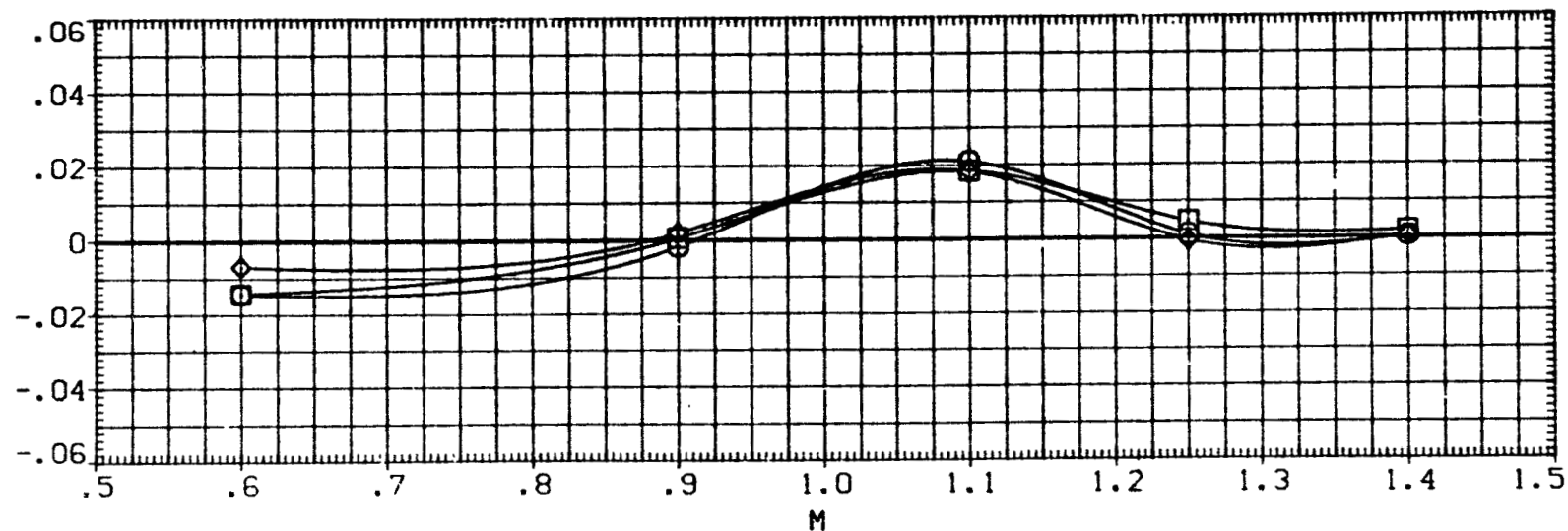


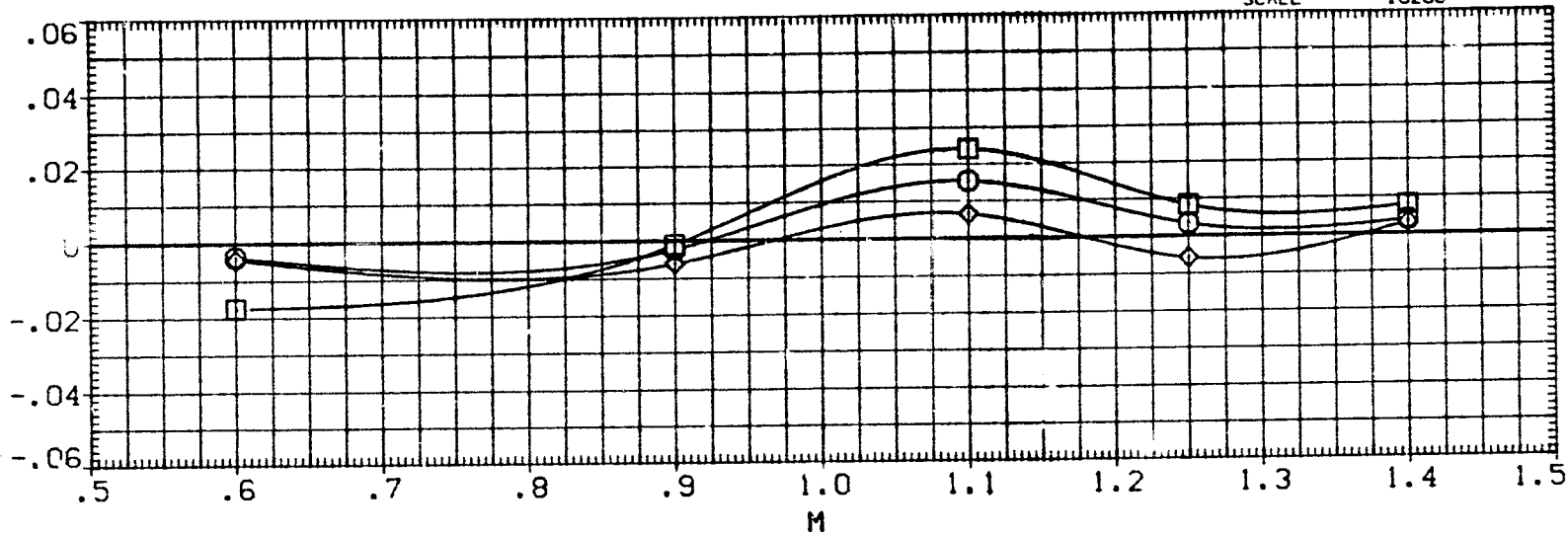
FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(CE4P20) ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-1B .000	CE4P20	.600
◇	.000	ELV-0B .000 RN/L 3.400	CE4P22	1.100
◇	4.000		CE4P24	1.400
			DATASET	MACH
			CE4P21	.900
			CE4P23	1.250

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	1290.3000 IN.
BREF	1290.3000 IN.
XMRP	.0000 IN.
YMRP	.0000 IN.
ZMRP	.0000 IN.
SCALE	.0200

DCP29A



DCP30A

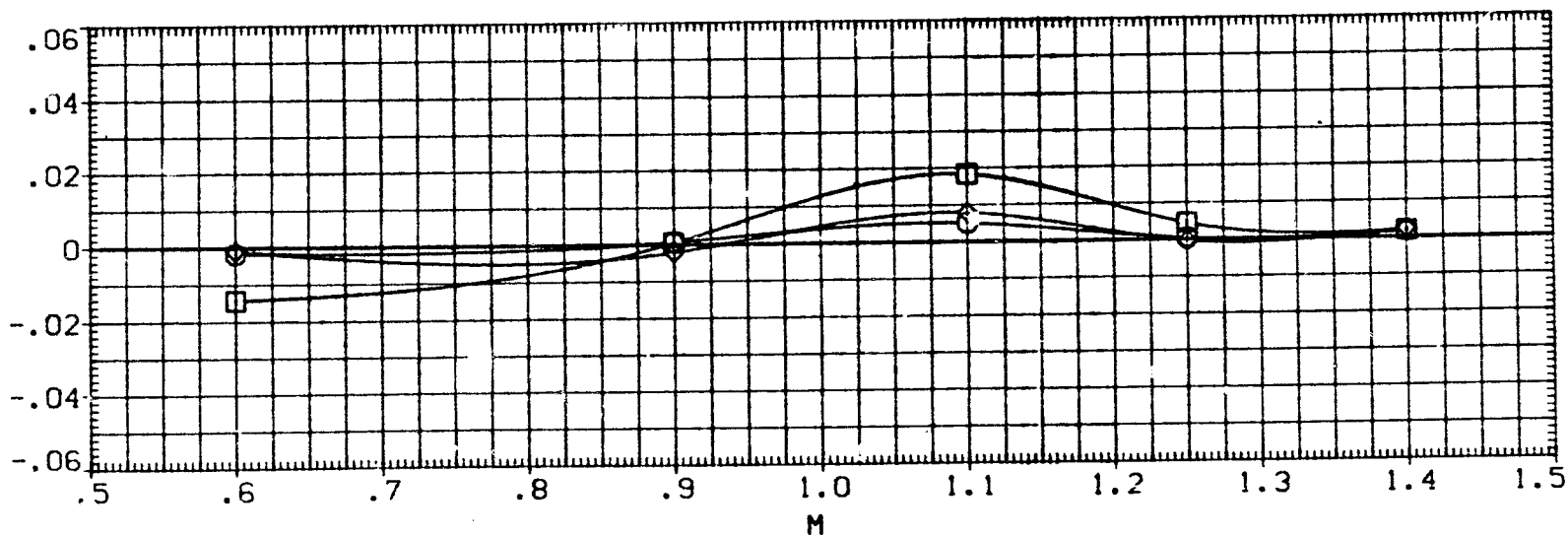


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

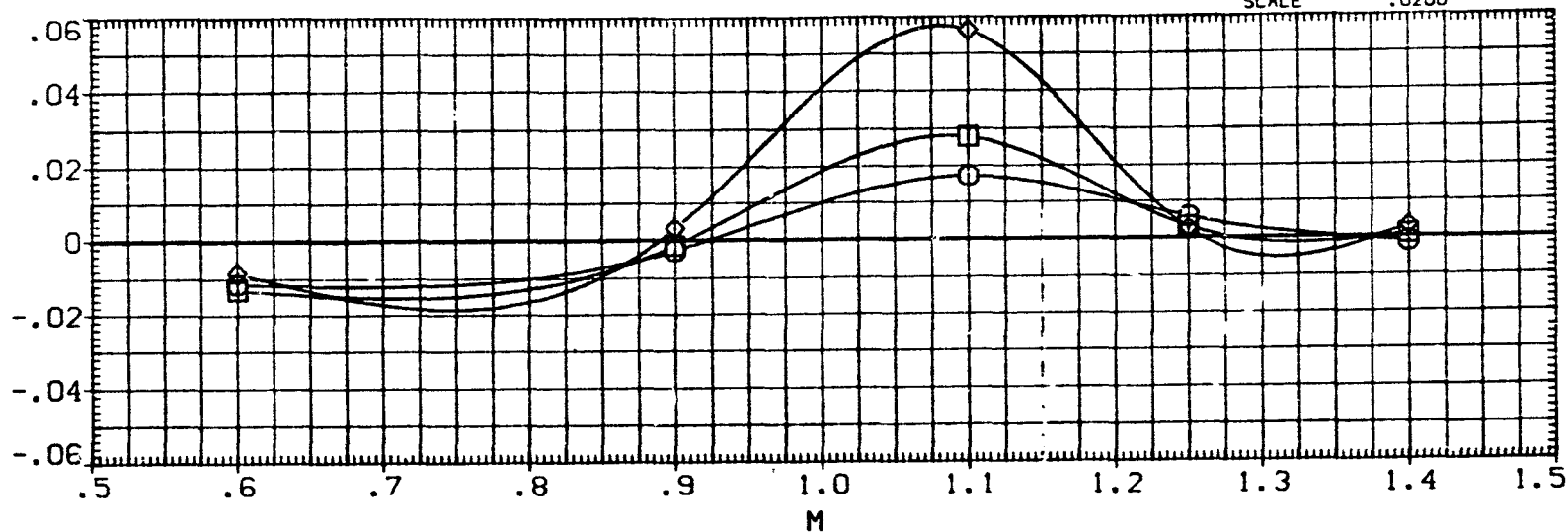
(HE4Q20) ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)

SYMBOL	ALPHA	BETA	ELV-08	PARAMETRIC VALUES	ELV-18	RN/L	HE4Q20	HE4Q21	HE4Q22	HE4Q23	HE4Q24	MACH
◇	-4.000			.000			.600					.900
□	.000			.000			1.100					1.250
○	4.000					3.400						

REFERENCE INFORMATION

	2690.0000	SO.FT.
SREF	1290.3000	IN.
LREF	1290.3000	IN.
BREF	.0000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP21A



DCP22A

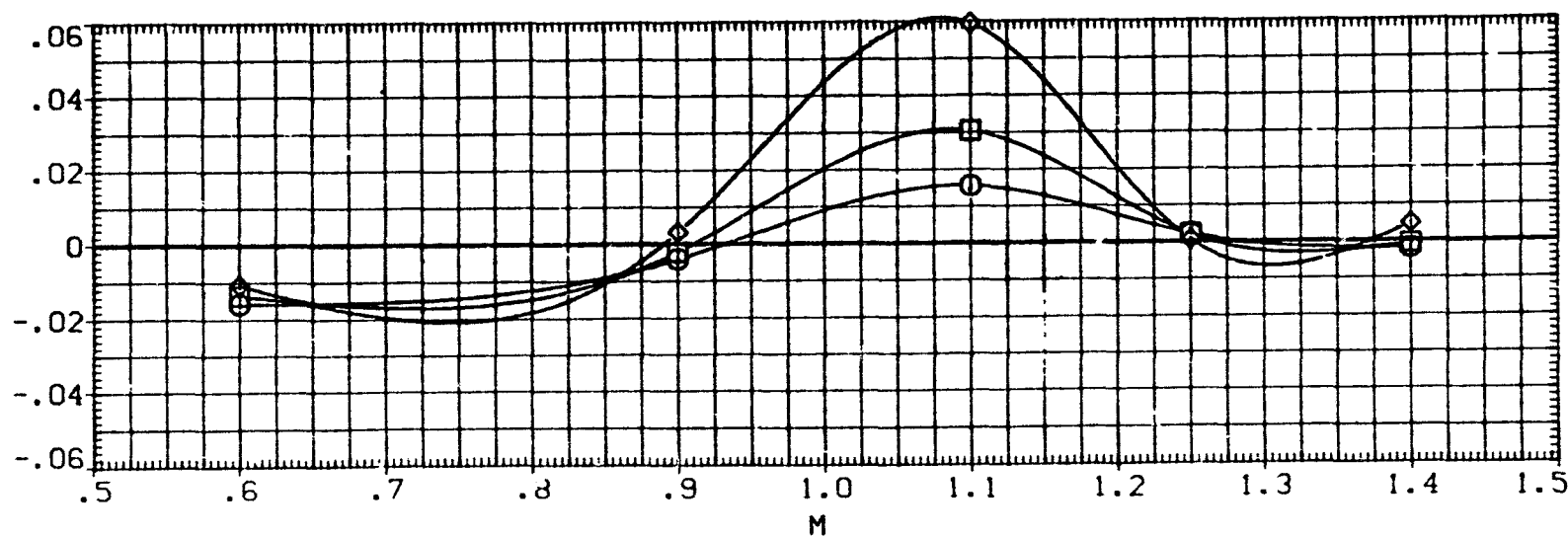


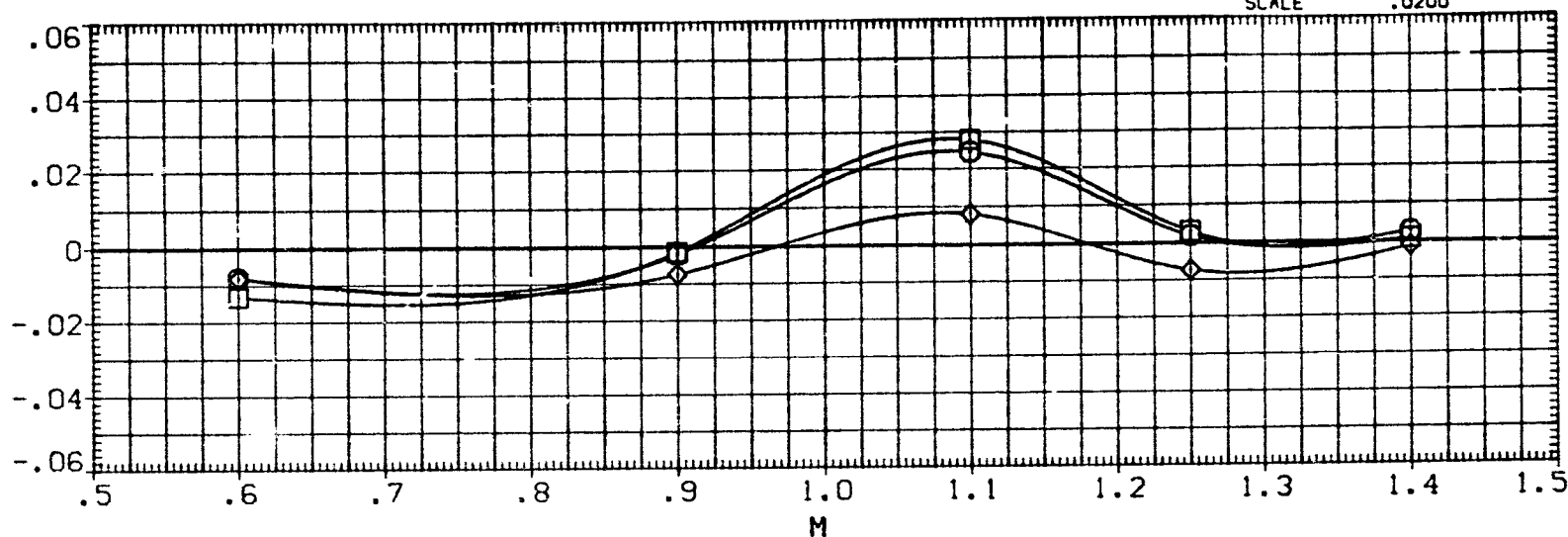
FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(HE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
◇	-4.000	ALPHA .000 ELV-1B .000	HE4P20	.600
◇	.000	ELV-0B .000 RN/L 3.400	HE4P22	1.100
◇	4.000		HE4P24	1.400
			DATASET	MACH
			HE4P21	.900
			HE4P23	1.250

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
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YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP21A



DCP22A

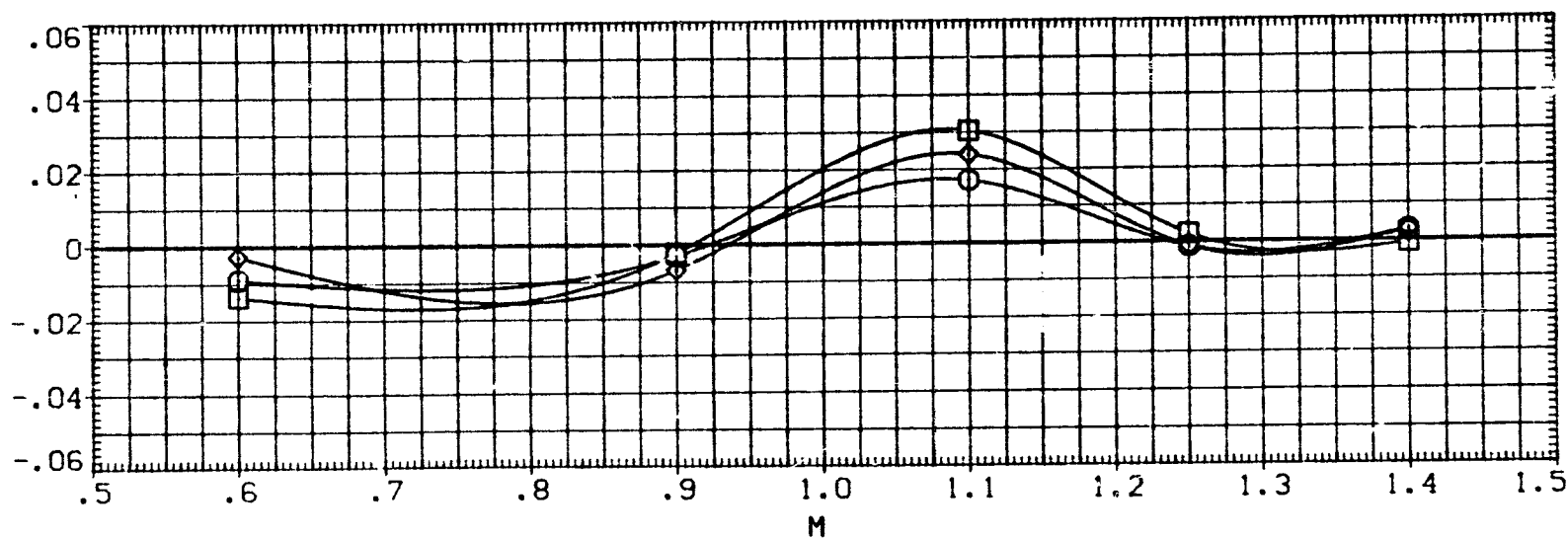


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

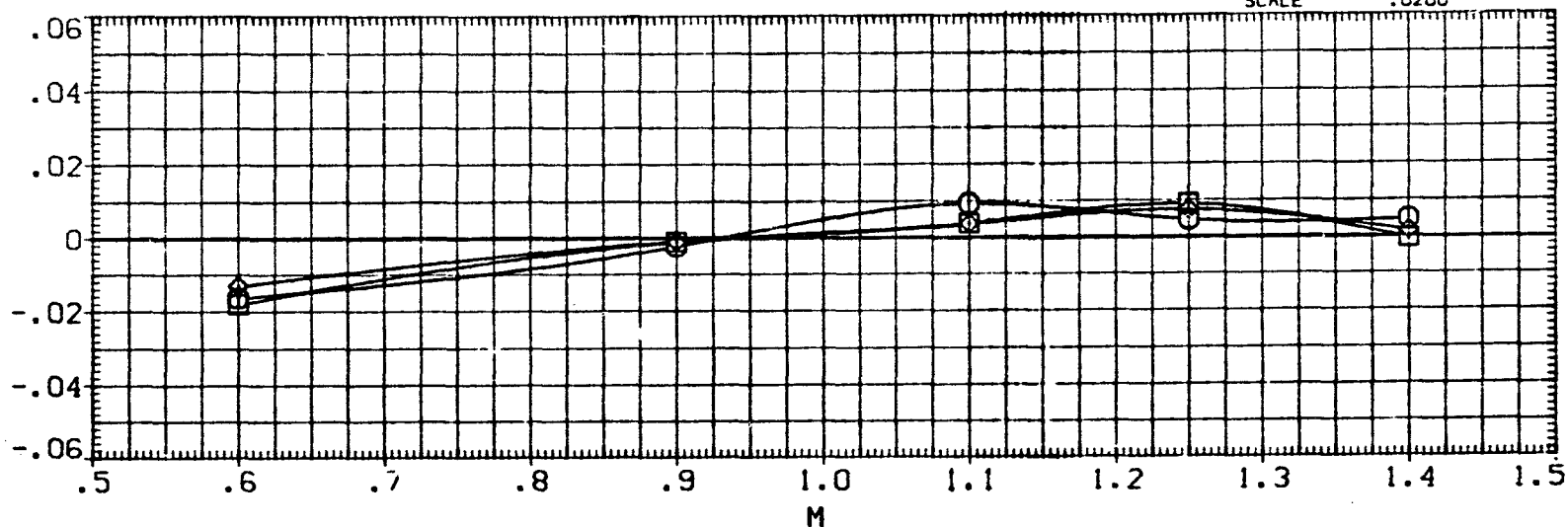
(JE4Q20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-0B	RN/L	3.400	JE4Q20	.600	JE4Q21	.900	JE4Q22	1.100	JE4Q23	1.250
◇	-4.000														
□	.000														
◇	4.000														

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP39A



DCP40A

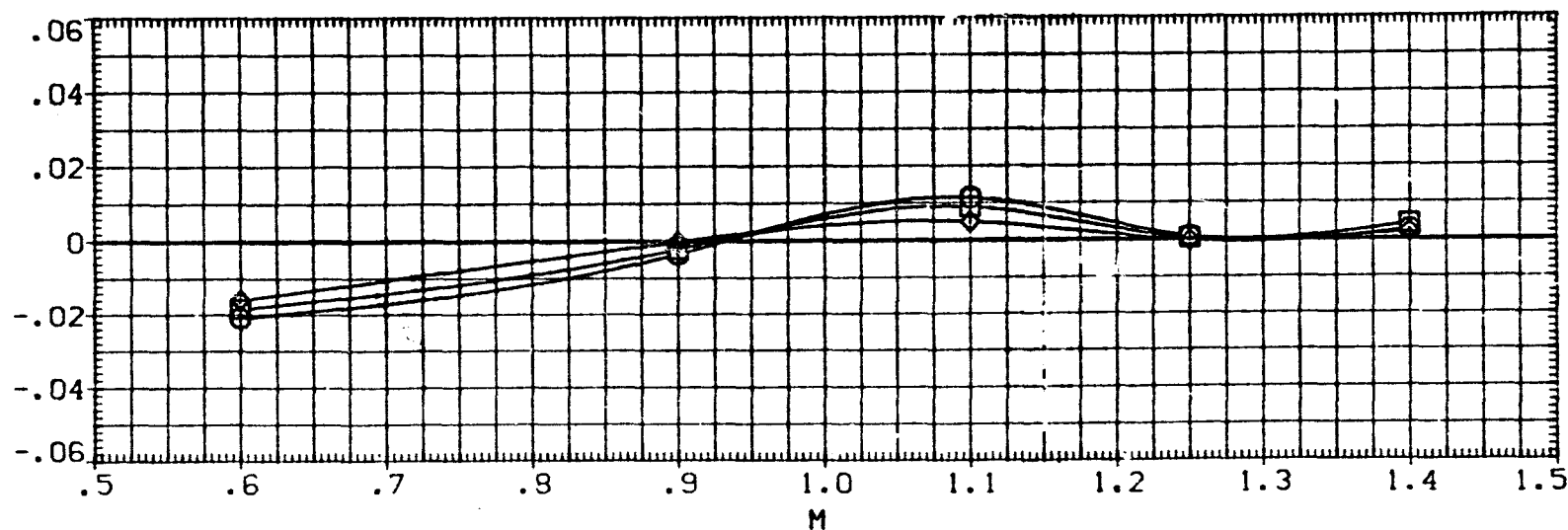


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

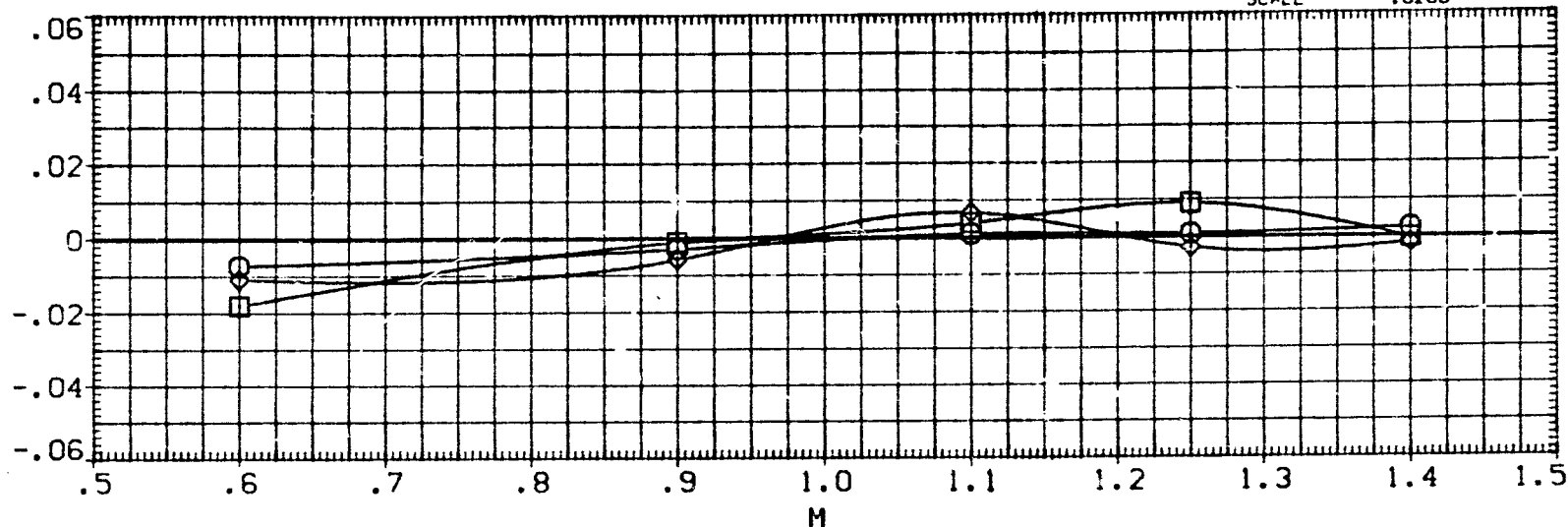
(JE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-1B .000	JE4P20	.600
◇	.000	ELV-OB .000 RN/L 3.400	JE4P22	1.100
□	4.000		JE4P24	1.400

REFERENCE INFORMATION

SREF	2690.0000	SQ. FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMPP	.0000	IN.
SCALE	.0200	

DCP39A



DCP40A

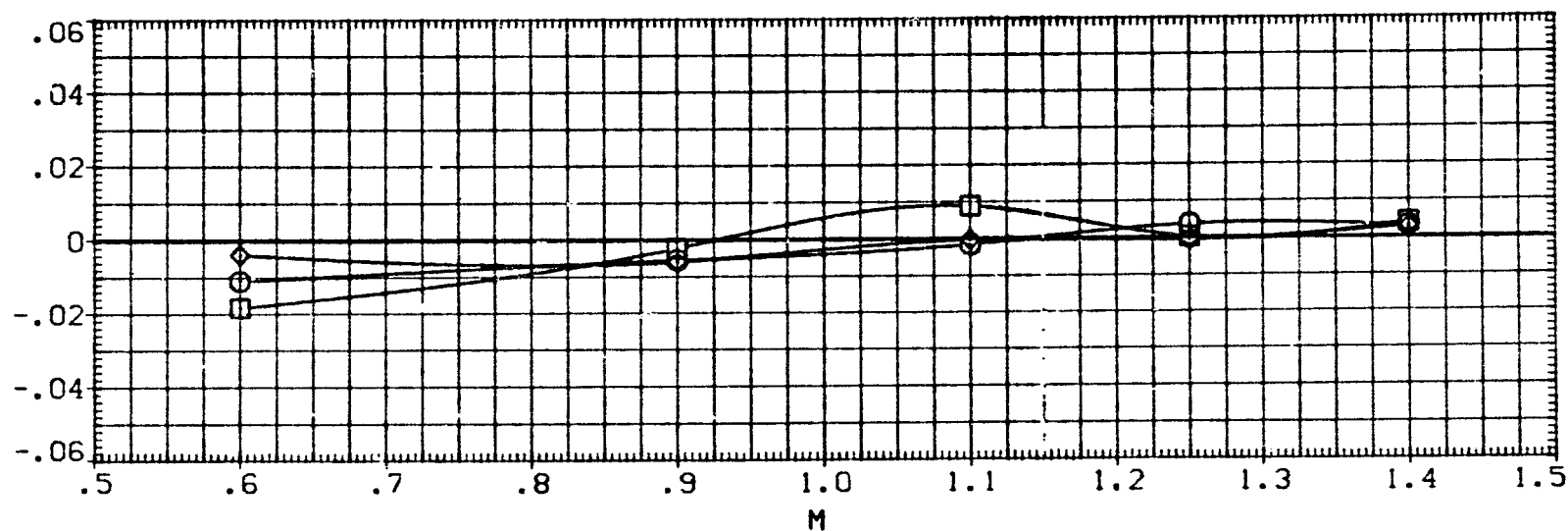


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

SYMBOL	ALPHA	BETA	PARAMETRIC VALUES	ELV-1B	ELV-2B	ELV-3B	ELV-4B	ELV-5B	ELV-6B	ELV-7B	ELV-8B	ELV-9B	ELV-10B	ELV-11B	ELV-12B	ELV-13B	ELV-14B	ELV-15B	ELV-16B	ELV-17B	ELV-18B	ELV-19B	ELV-20B	ELV-21B	ELV-22B	ELV-23B	ELV-24B	ELV-25B	ELV-26B	ELV-27B	ELV-28B	ELV-29B	ELV-30B	ELV-31B	ELV-32B	ELV-33B	ELV-34B	ELV-35B	ELV-36B	ELV-37B	ELV-38B	ELV-39B	ELV-40B	ELV-41B	ELV-42B	ELV-43B	ELV-44B	ELV-45B	ELV-46B	ELV-47B	ELV-48B	ELV-49B	ELV-50B	ELV-51B	ELV-52B	ELV-53B	ELV-54B	ELV-55B	ELV-56B	ELV-57B	ELV-58B	ELV-59B	ELV-60B	ELV-61B	ELV-62B	ELV-63B	ELV-64B	ELV-65B	ELV-66B	ELV-67B	ELV-68B	ELV-69B	ELV-70B	ELV-71B	ELV-72B	ELV-73B	ELV-74B	ELV-75B	ELV-76B	ELV-77B	ELV-78B	ELV-79B	ELV-80B	ELV-81B	ELV-82B	ELV-83B	ELV-84B	ELV-85B	ELV-86B	ELV-87B	ELV-88B	ELV-89B	ELV-90B	ELV-91B	ELV-92B	ELV-93B	ELV-94B	ELV-95B	ELV-96B	ELV-97B	ELV-98B	ELV-99B	ELV-100B	ELV-101B	ELV-102B	ELV-103B	ELV-104B	ELV-105B	ELV-106B	ELV-107B	ELV-108B	ELV-109B	ELV-110B	ELV-111B	ELV-112B	ELV-113B	ELV-114B	ELV-115B	ELV-116B	ELV-117B	ELV-118B	ELV-119B	ELV-120B	ELV-121B	ELV-122B	ELV-123B	ELV-124B	ELV-125B	ELV-126B	ELV-127B	ELV-128B	ELV-129B	ELV-130B	ELV-131B	ELV-132B	ELV-133B	ELV-134B	ELV-135B	ELV-136B	ELV-137B	ELV-138B	ELV-139B	ELV-140B	ELV-141B	ELV-142B	ELV-143B	ELV-144B	ELV-145B	ELV-146B	ELV-147B	ELV-148B	ELV-149B	ELV-150B	ELV-151B	ELV-152B	ELV-153B	ELV-154B	ELV-155B	ELV-156B	ELV-157B	ELV-158B	ELV-159B	ELV-160B	ELV-161B	ELV-162B	ELV-163B	ELV-164B	ELV-165B	ELV-166B	ELV-167B	ELV-168B	ELV-169B	ELV-170B	ELV-171B	ELV-172B	ELV-173B	ELV-174B	ELV-175B	ELV-176B	ELV-177B	ELV-178B	ELV-179B	ELV-180B	ELV-181B	ELV-182B	ELV-183B	ELV-184B	ELV-185B	ELV-186B	ELV-187B	ELV-188B	ELV-189B	ELV-190B	ELV-191B	ELV-192B	ELV-193B	ELV-194B	ELV-195B	ELV-196B	ELV-197B	ELV-198B	ELV-199B	ELV-200B	ELV-201B	ELV-202B	ELV-203B	ELV-204B	ELV-205B	ELV-206B	ELV-207B	ELV-208B	ELV-209B	ELV-210B	ELV-211B	ELV-212B	ELV-213B	ELV-214B	ELV-215B	ELV-216B	ELV-217B	ELV-218B	ELV-219B	ELV-220B	ELV-221B	ELV-222B	ELV-223B	ELV-224B	ELV-225B	ELV-226B	ELV-227B	ELV-228B	ELV-229B	ELV-230B	ELV-231B	ELV-232B	ELV-233B	ELV-234B	ELV-235B	ELV-236B	ELV-237B	ELV-238B	ELV-239B	ELV-240B	ELV-241B	ELV-242B	ELV-243B	ELV-244B	ELV-245B	ELV-246B	ELV-247B	ELV-248B	ELV-249B	ELV-250B	ELV-251B	ELV-252B	ELV-253B	ELV-254B	ELV-255B	ELV-256B	ELV-257B	ELV-258B	ELV-259B	ELV-260B	ELV-261B	ELV-262B	ELV-263B	ELV-264B	ELV-265B	ELV-266B	ELV-267B	ELV-268B	ELV-269B	ELV-270B	ELV-271B	ELV-272B	ELV-273B	ELV-274B	ELV-275B	ELV-276B	ELV-277B	ELV-278B	ELV-279B	ELV-280B	ELV-281B	ELV-282B	ELV-283B	ELV-284B	ELV-285B	ELV-286B	ELV-287B	ELV-288B	ELV-289B	ELV-290B	ELV-291B	ELV-292B	ELV-293B	ELV-294B	ELV-295B	ELV-296B	ELV-297B	ELV-298B	ELV-299B	ELV-300B	ELV-301B	ELV-302B	ELV-303B	ELV-304B	ELV-305B	ELV-306B	ELV-307B	ELV-308B	ELV-309B	ELV-310B	ELV-311B	ELV-312B	ELV-313B	ELV-314B	ELV-315B	ELV-316B	ELV-317B	ELV-318B	ELV-319B	ELV-320B
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REFERENCE INFORMATION		
SREF	2690.0000	50.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

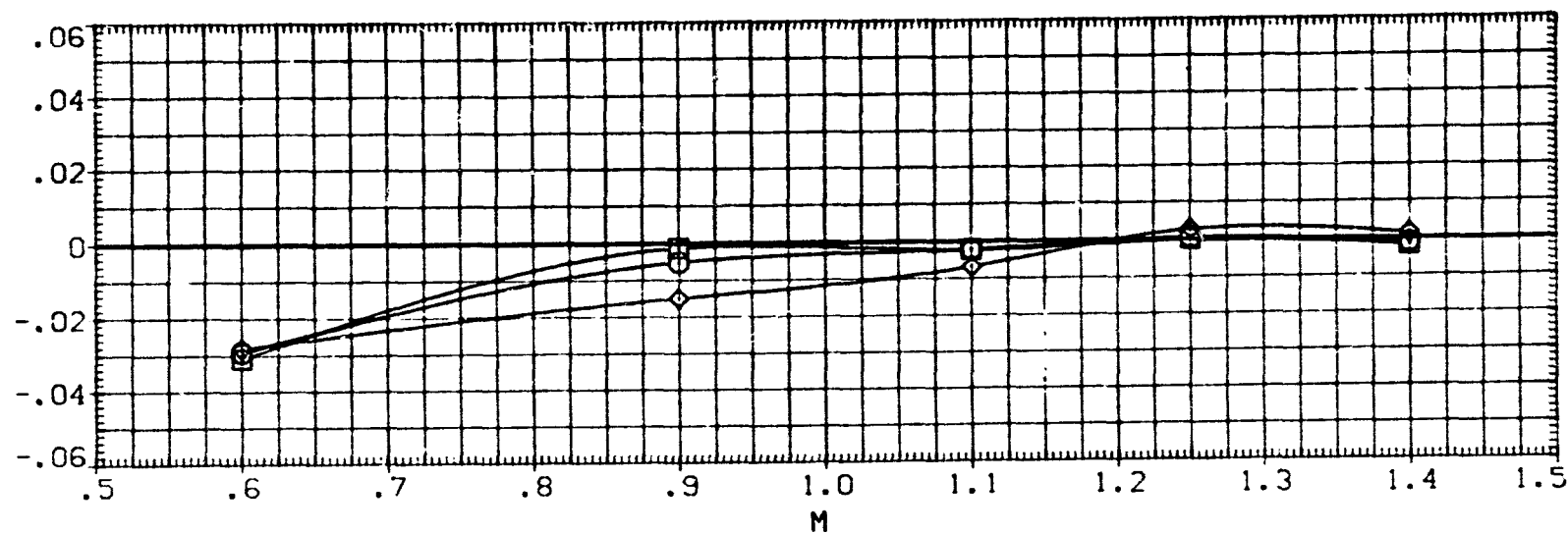
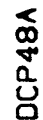
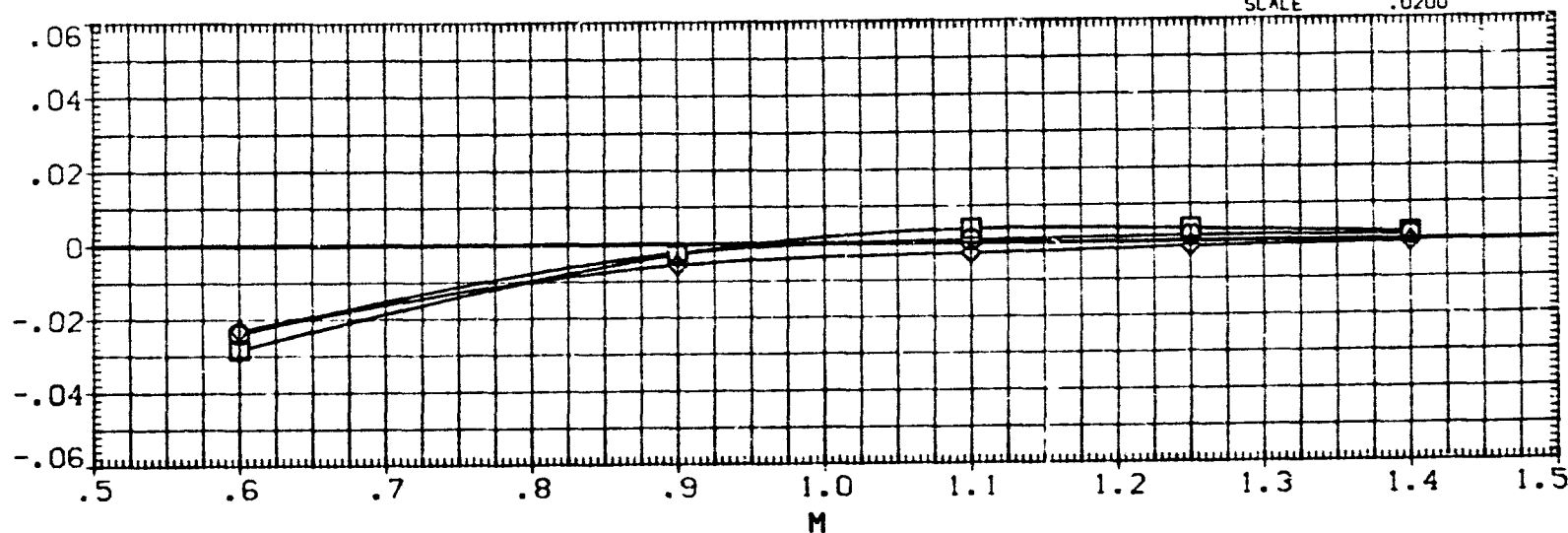
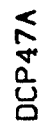


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(KE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	BETA		PARAMETRIC VALUES		DATASET		MACH	
	-4.000	4.000	ALPHA	ELV-OB	ELV-1R	RN/L	KE4P20	KE4P22
○			.000	.000	.000	3.400	KE4P21	1.600
□			.000	.000	.000	3.400	KE4P23	1.100
◇			.000	.000	.000	3.400	KE4P24	1.400

REFERENCE INFORMATION

	2690.0000	SQ.FT.
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

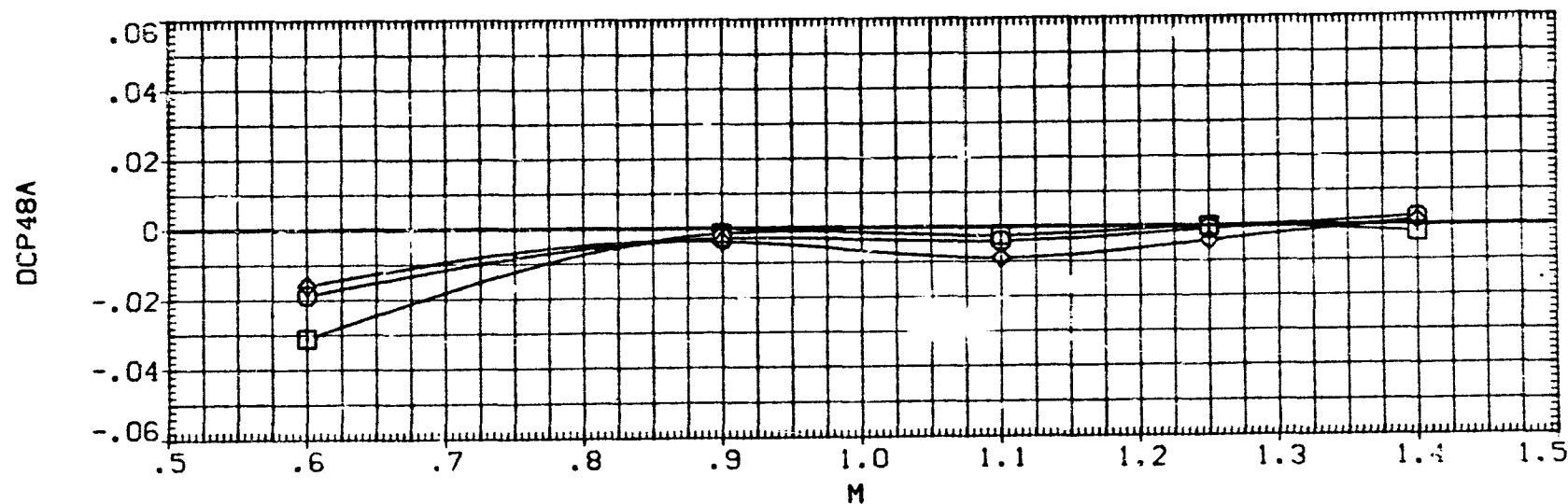
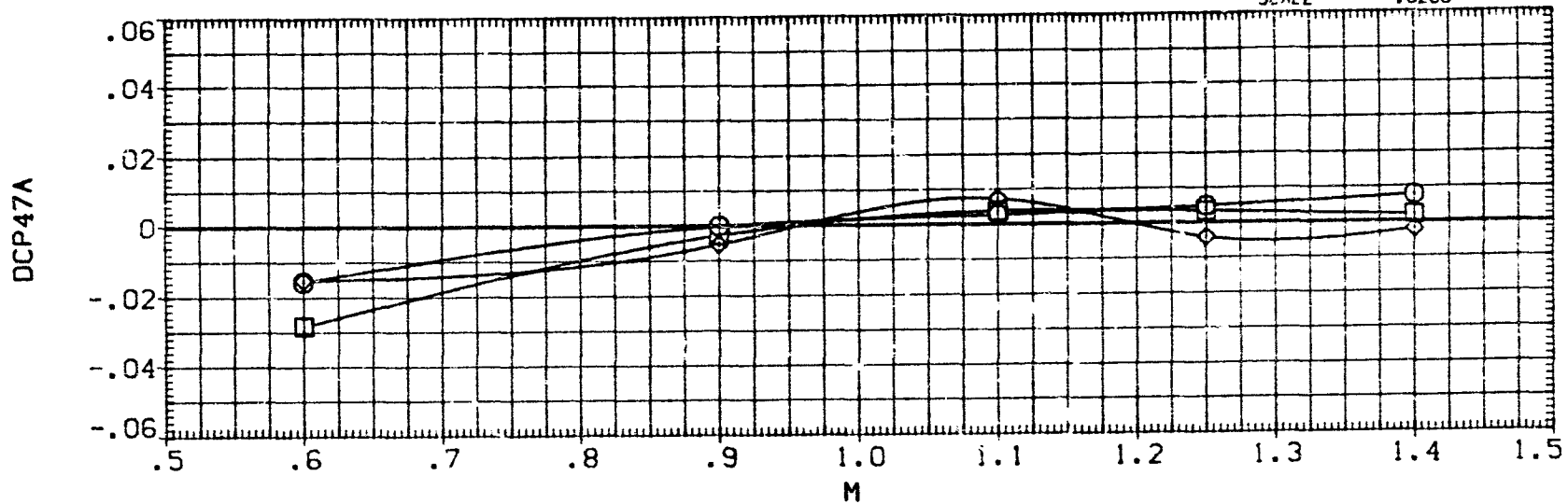
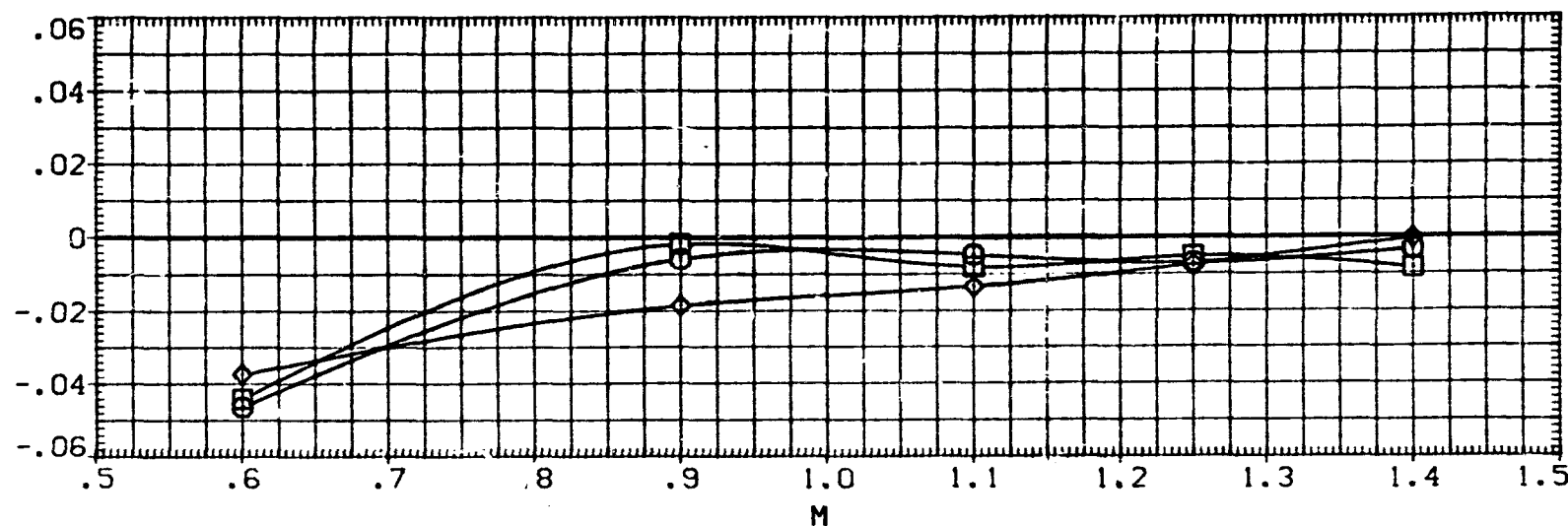


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

SKEF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	790.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	



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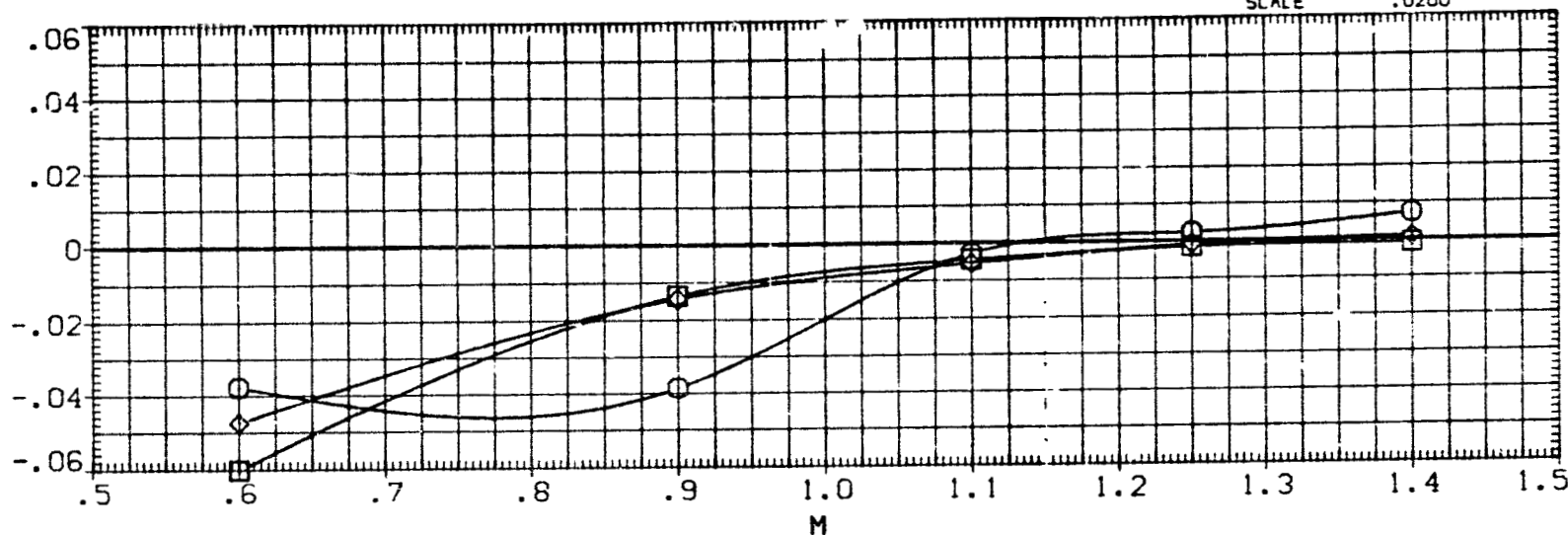
(DE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SS: NOM)

SYMBOL	BE/A	PARAMETRIC VALUES			DATASET	MACH	DATASET	MACH	
◇	-4.000	ALPHA	.000	ELV-1B	.000	DE4P20	.600	DE4P21	.900
○	.000	ELV-0B	.000	RN/L	3.400	DE4P22	.100	DE4P23	1.250
□	4.000					DE4P24	1.00		

REFERENCE INFORMATION

	2690.0000	SQ.FT.
SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP75A



DCP76A

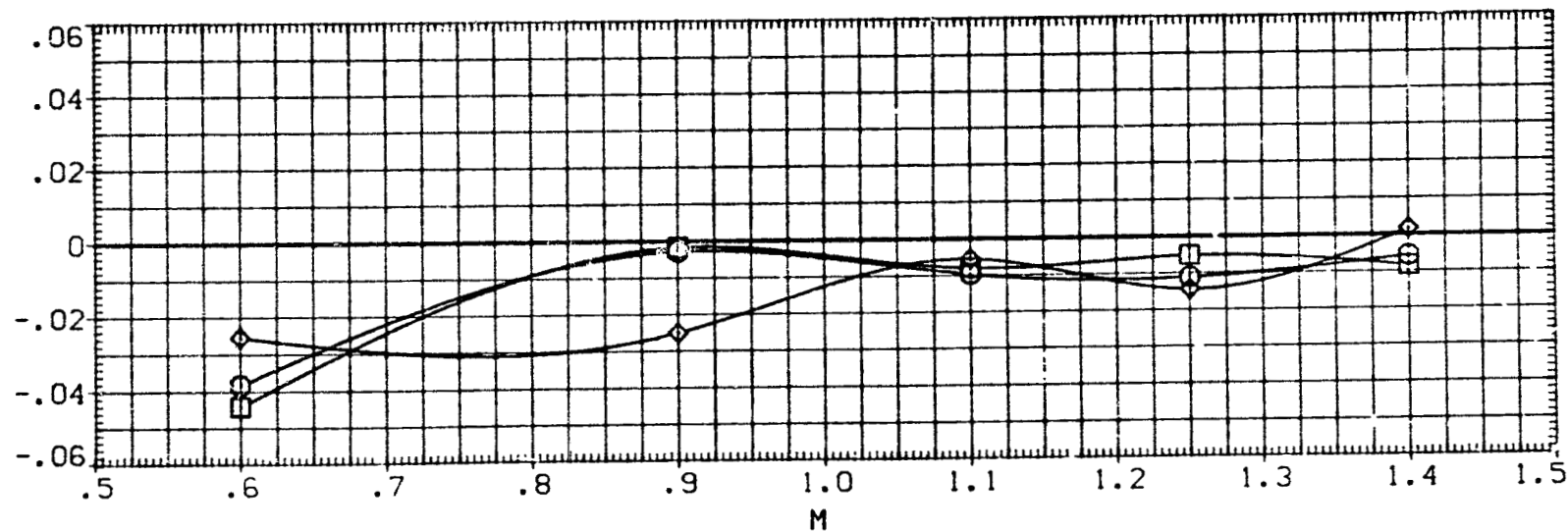


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

(LE4020) ARC 11-023 1A80 QTS (SRB NOM) (SSME NOM)

SYMBOL

ALPHA

BETA
ELV-08

PARAMETRIC VALUES

ELV-18
RN/L

3.400

DATASET

NACH

DATASET

MACH

REFERENCE INFORMATION

SREF 2690.0000

SQ.FT.

LREF 1290.3000

IN.

BREF	1290.3000
MMDD	0000

BREF	1290.3000	IN.
XMPD	0000	IN.

XMRP	.0000
YMRP	0000

XMRP	.0000	IN.
YMRP	.0000	IN.

7MRP	.0000
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7MRP	.0000	IN.
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SCALE .0200

SCALE .0200

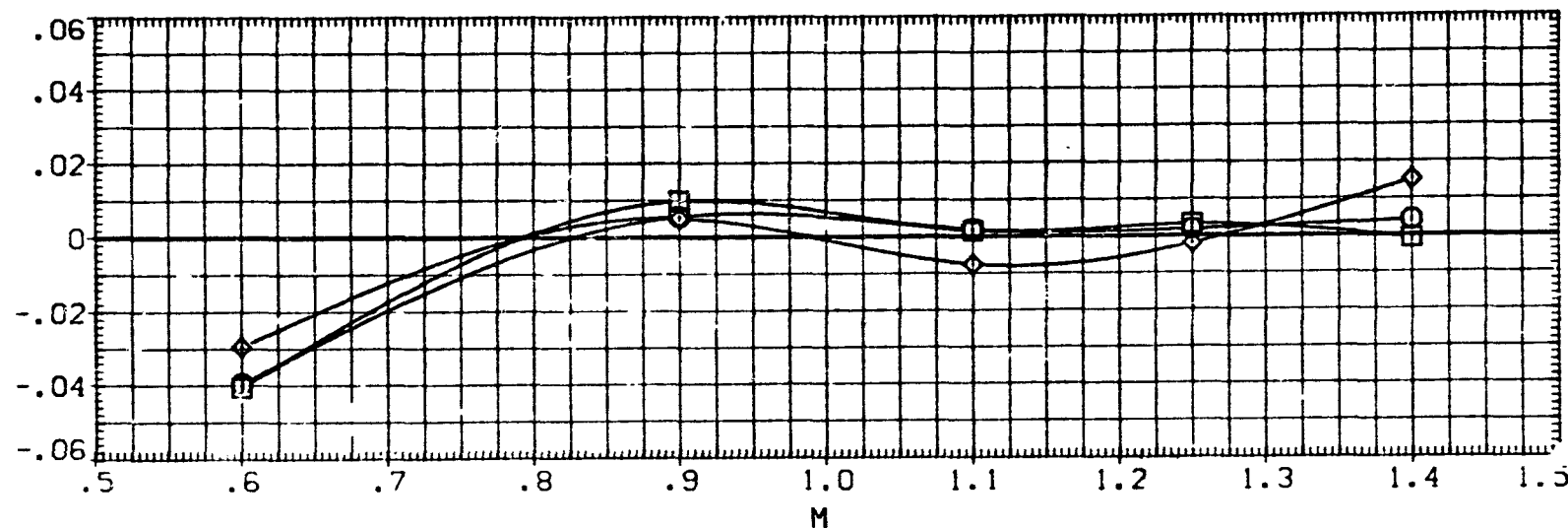
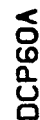
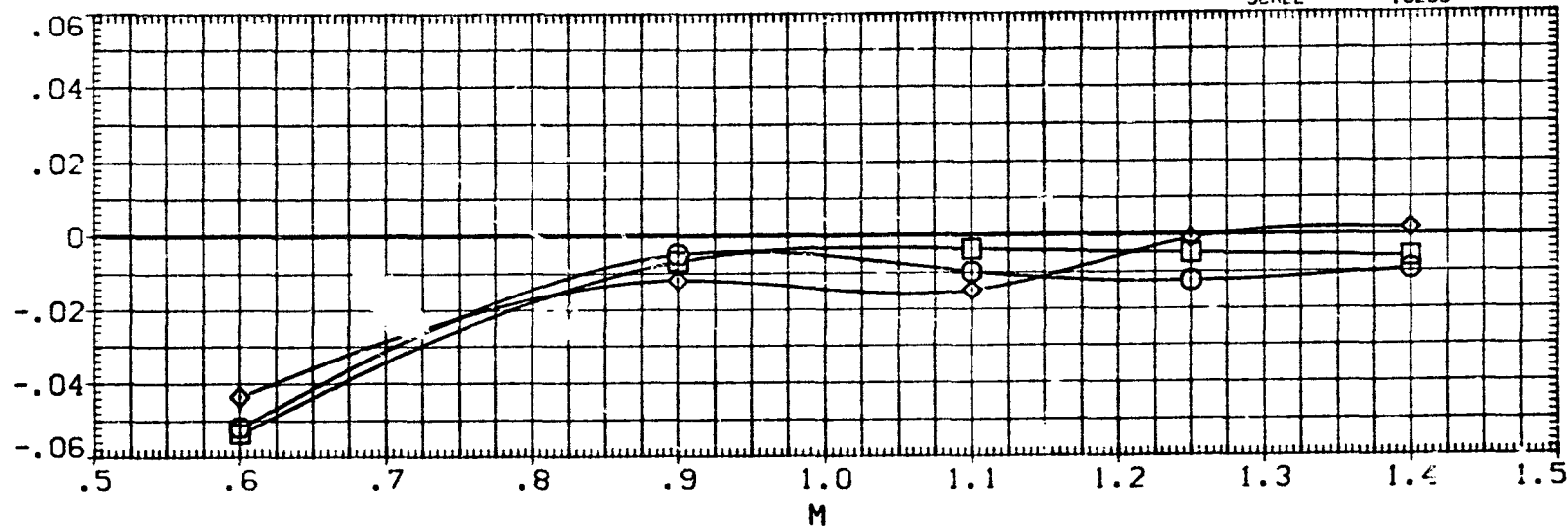
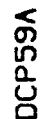


FIG. 129 DELTA AVERAGE ORBITAL PRESSURES DUE TO PLUMES

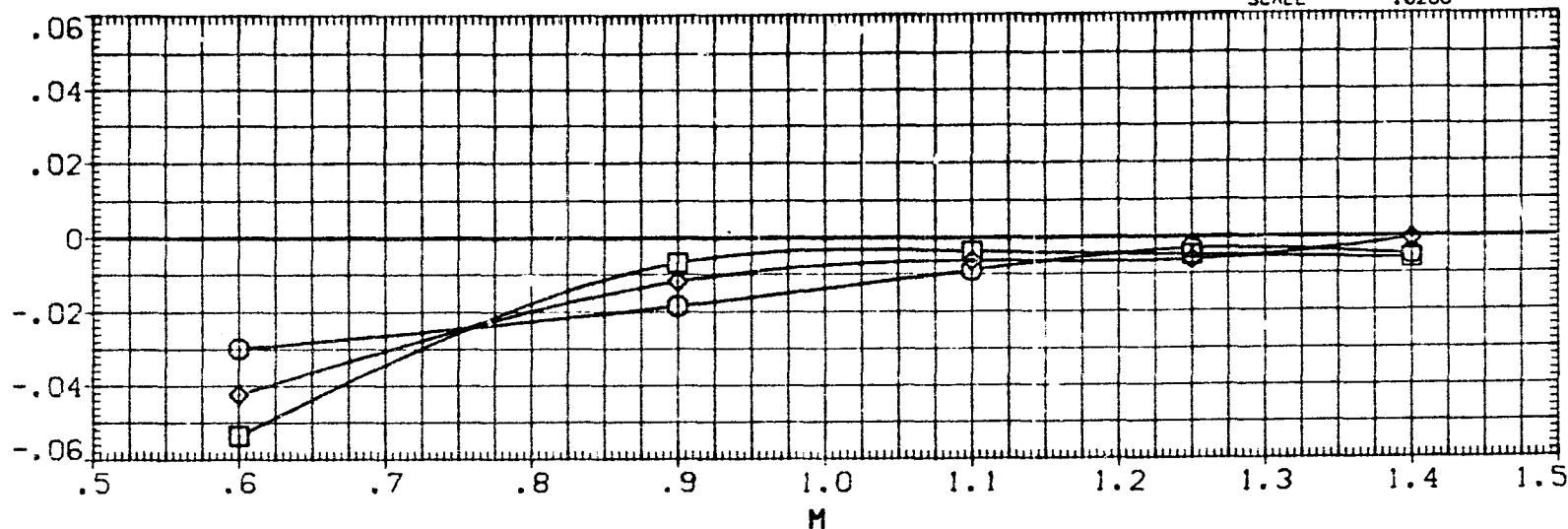
(LE4P20) ARC 11-023 1A80 OTS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES	ELV-18	ELV-08	RN/L	3.400	LE4P20	LE4P21	LE4P22	LE4P23	LE4P24	MACH	0.600	1.100	1.400
◇	-4.000	ALPHA	.000	ELV-08	.000										
◇	.000														
◇	4.000														

REFERENCE INFORMATION

SYMBOL	VALUE	UNIT
SREF	2690.0000	SG.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP59A



DCP60A

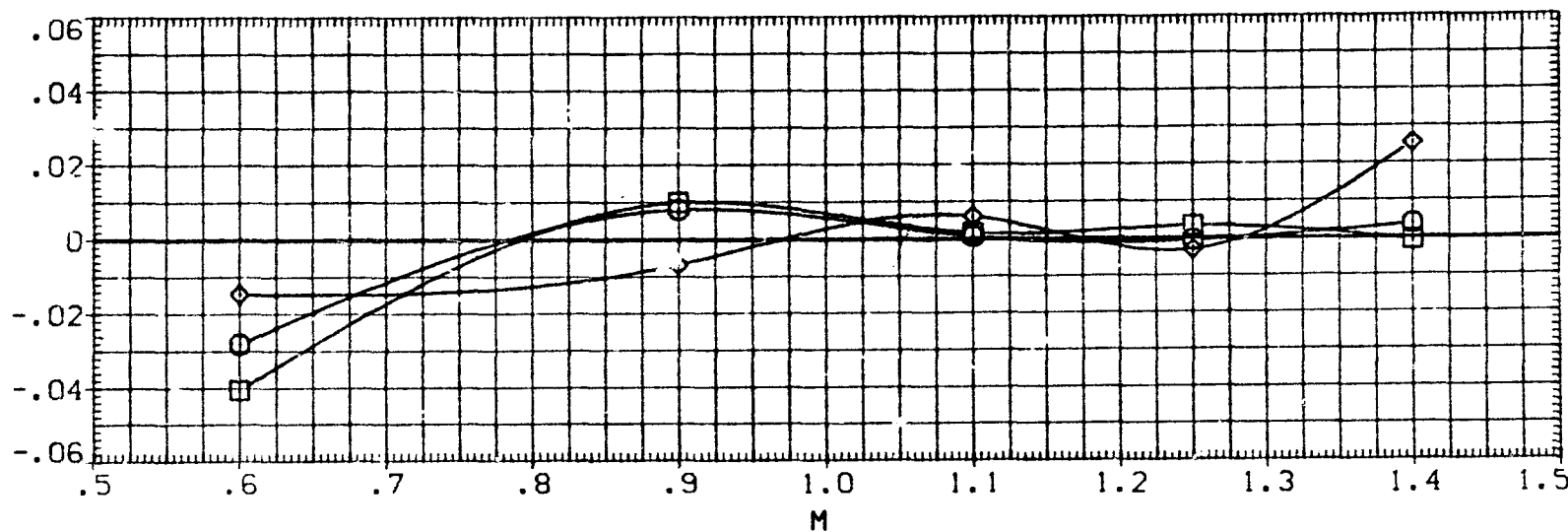


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

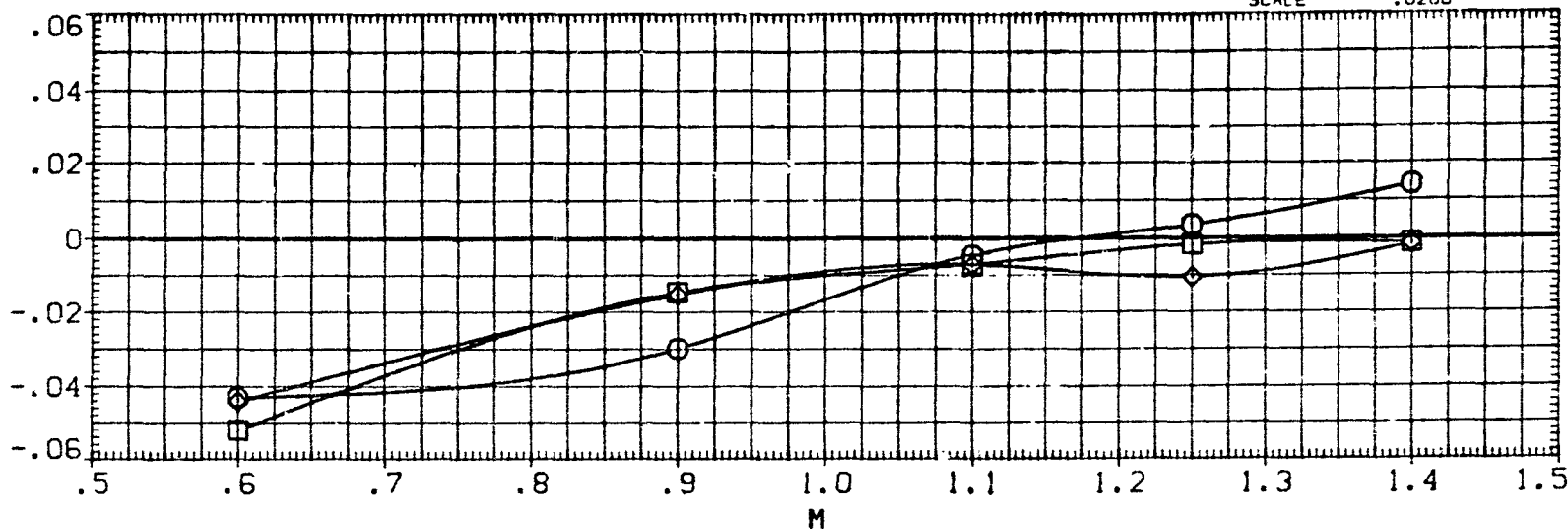
(ME4P20) ARC 11-023 1A80 0TS (SRB NOM) (SSME NOM)

SYMBOL	BETA	PARAMETRIC VALUES	DATASET	MACH
○	-4.000	ALPHA .000 ELV-IB .000	ME4P20	.600
◇	.000	ELV-OB .000 RN/L 3.400	ME4P22	1.100
□	4.000		ME4P24	1.400

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	IN.
BREF	1290.3000	IN.
XMRP	.0000	IN.
YMRP	.0000	IN.
ZMRP	.0000	IN.
SCALE	.0200	

DCP67A



DCP68A

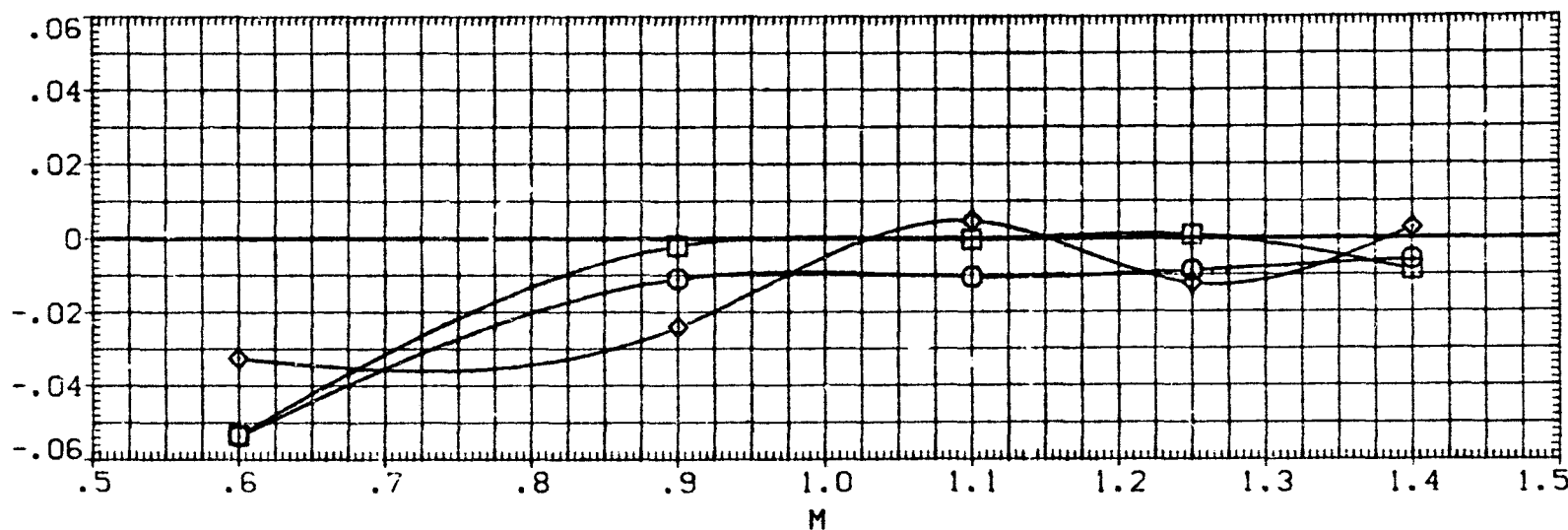


FIG. 129 DELTA AVERAGE ORB VENT PRESSURES DUE TO PLUMES

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
AE4H281	○	ARC11-0231AB0 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
AE4H201	□	ARC11-0231AB0 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
AE4H111	△	ARC11-0231AB0 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
AE4H851	○	ARC11-0231A90 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.600	3.400
AE4H801	△	ARC11-0231A90 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.600	3.400

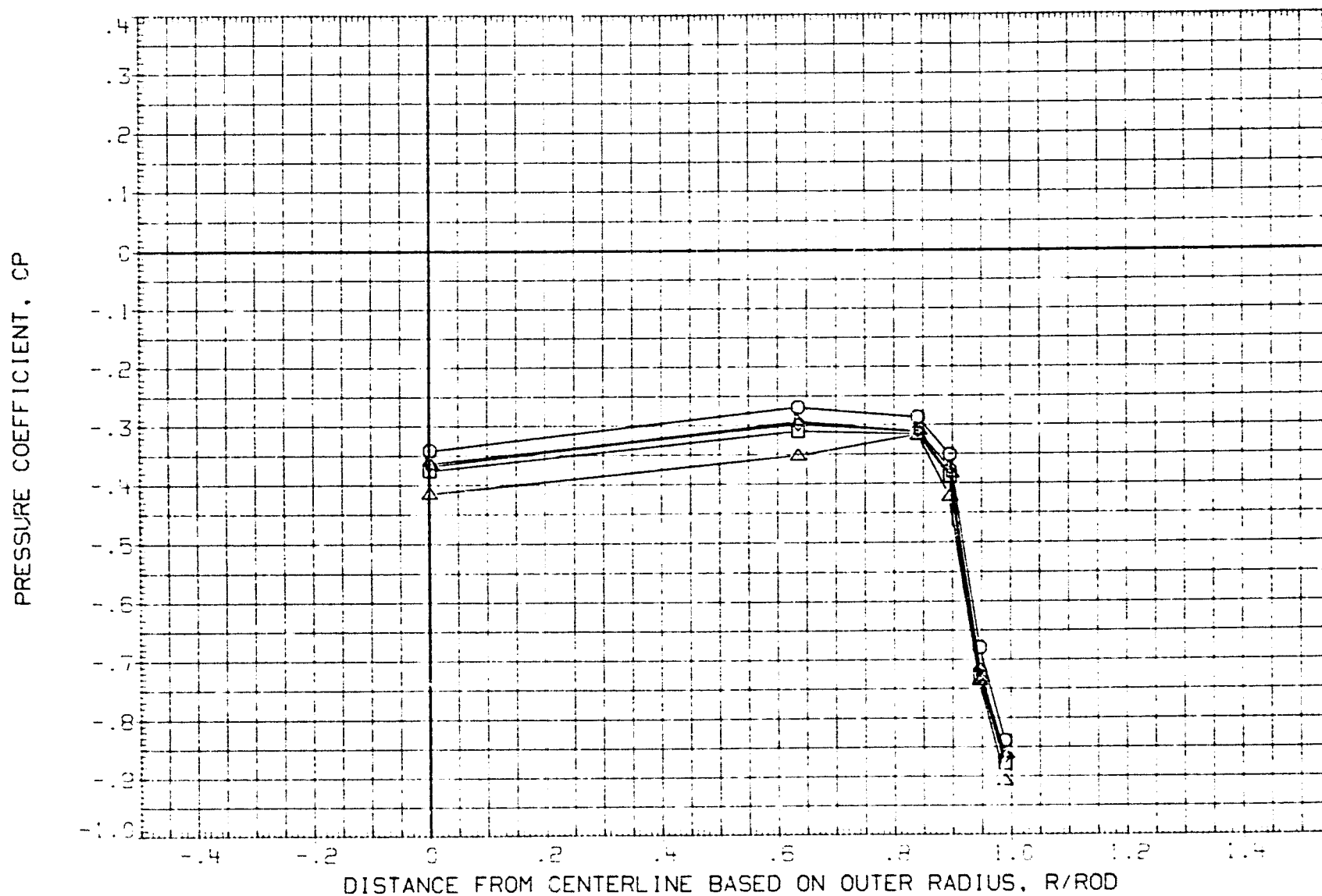


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 0.000 BETA = 0.000 PHI = 0.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-19	ELV-09	MACH	RN/L
(AE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(AE4H29)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N*) ET BASE	.000	.000	.600	3.400
(AE4H05)	△	ARC11-0231A90 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.600	3.400
(AE4H03)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.600	3.400

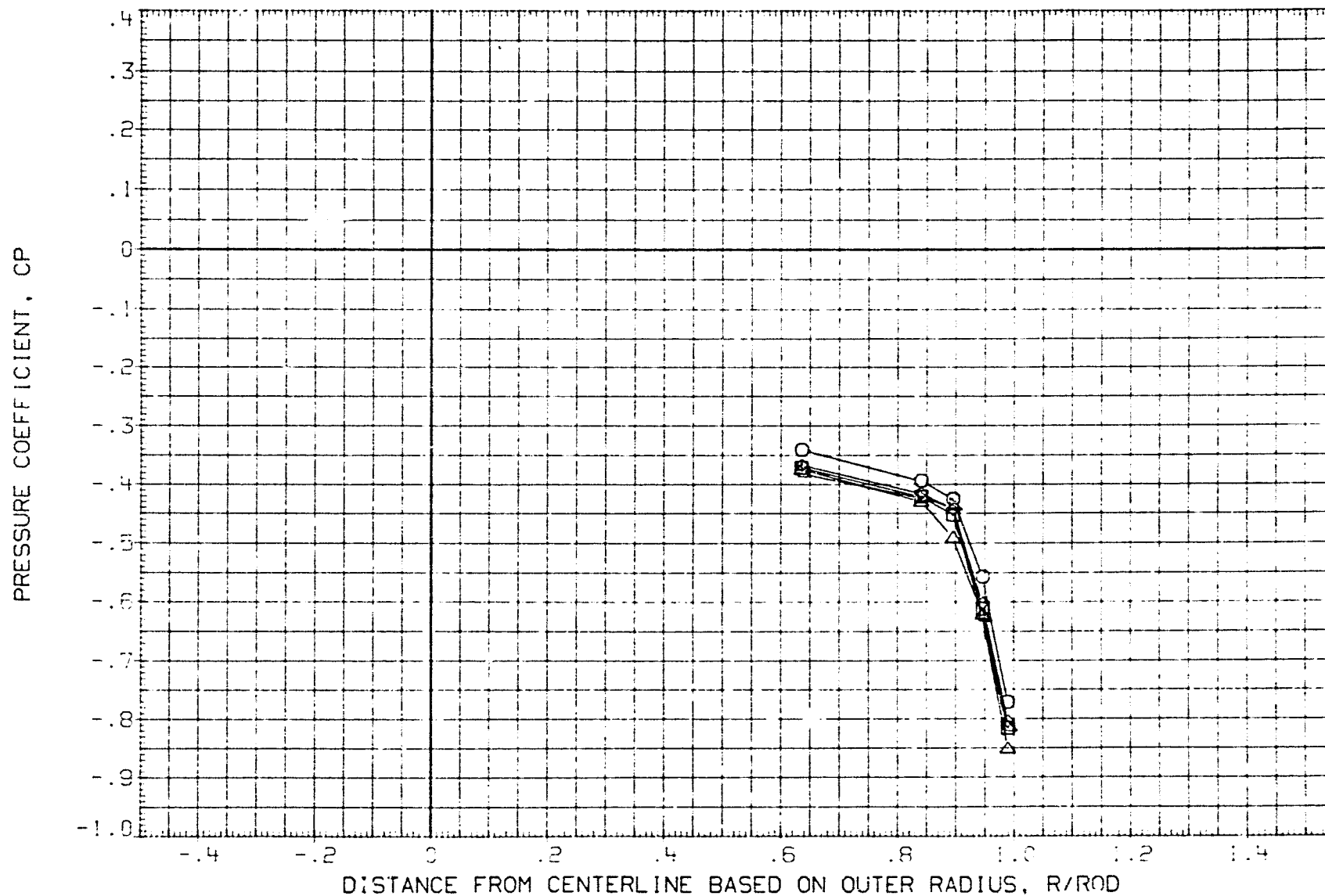


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = -4.000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
14544291	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
14544301	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
14544311	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
14544351	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.600	3.400
14544361	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.600	3.400

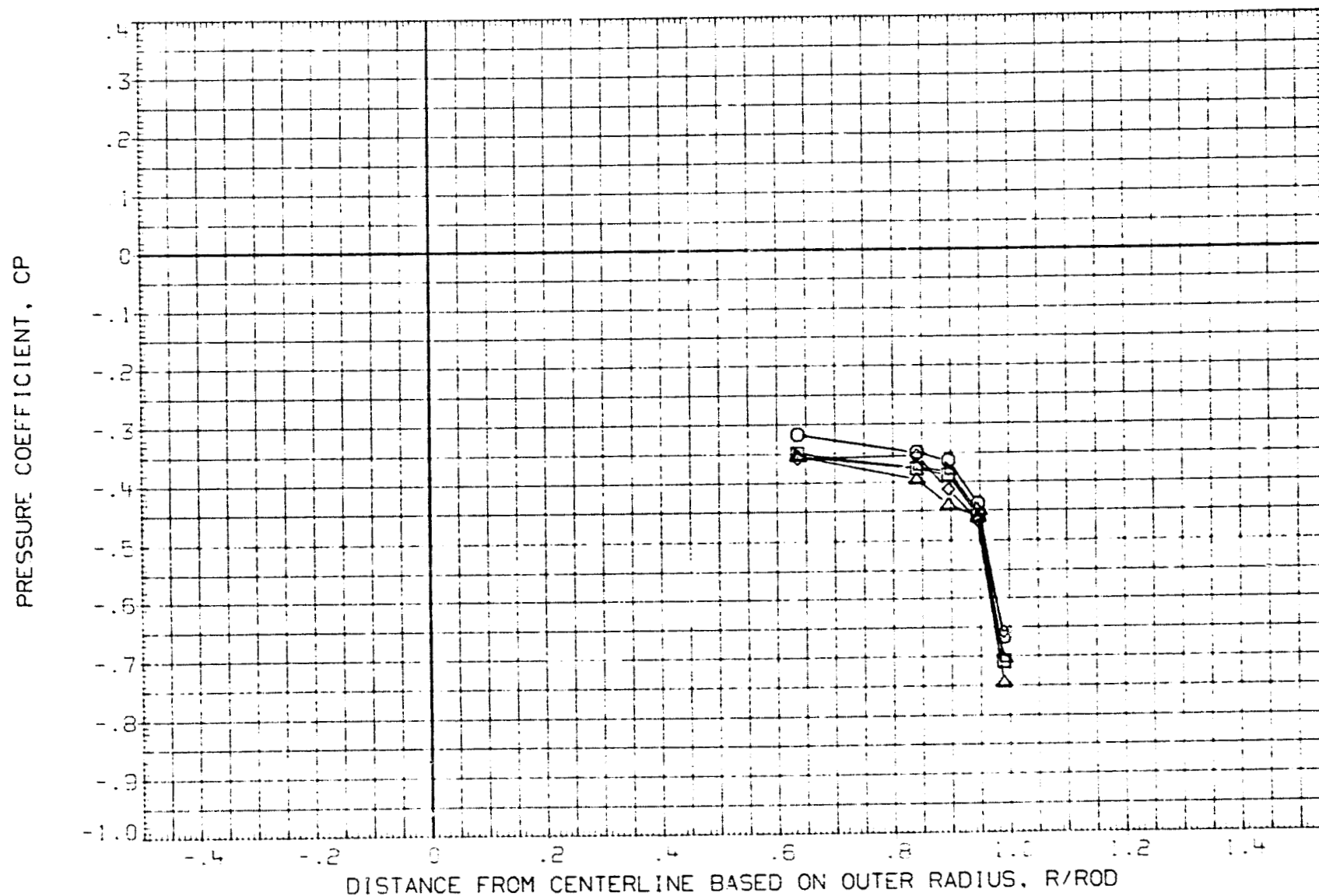


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE44PB)	○	ARC11-0231A80 OTS(SRB=OFF CRB=OFF) ET BASE	.000	.000	.600	3.400
(AE44PB)	□	ARC11-0231A80 OTS(SRB=N CRB=N) ET BASE	.000	.000	.600	3.400
(AE44H1)	△	ARC11-0231A80 OTS(SRB=N CRB=N) ET BASE	.000	.000	.600	3.400
(AE44PB)	△	ARC11-0231A80 OTS(SRB=N CRB NO.1 OUT) ET BASE	.000	.000	.600	3.400
(AE44PB)	△	ARC11-0231A80 OTS(SRB=N CRB NO.2 OUT) ET BASE	.000	.000	.600	3.400

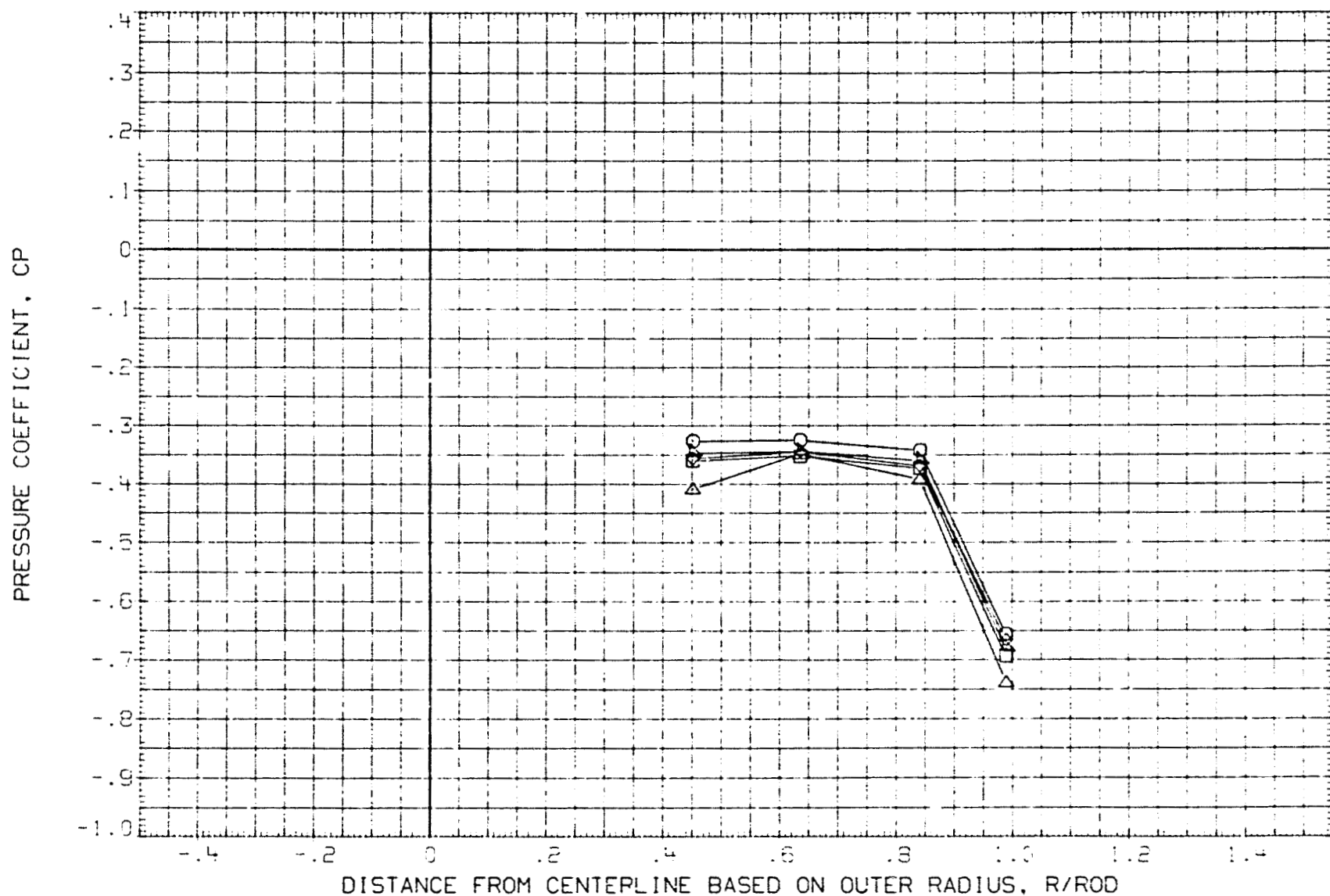


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = -4.000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H28)	○	ARC11-0231A80 OTS:SRB=OFF CRB=OFF1 ET BASE	.000	.000	.600	3.400
(AE4H20)	◇	ARC11-0231A80 OTS:SRB=N CRB=N1 ET BASE	.000	.000	.600	3.400
(AE4H11)	△	ARC11-0231A80 OTS:SRB=N CRB=N+1 ET BASE	.000	.000	.600	3.400
(AE4H95)	▲	ARC11-0231A80 OTS:SRB=N CRB NO.1 OUTLET BASE	.000	.000	.600	3.400
(AE4H80)	⬢	ARC11-0231A80 OTS:SRB=N CRB NO.2 OUTLET BASE	.000	.000	.600	3.400

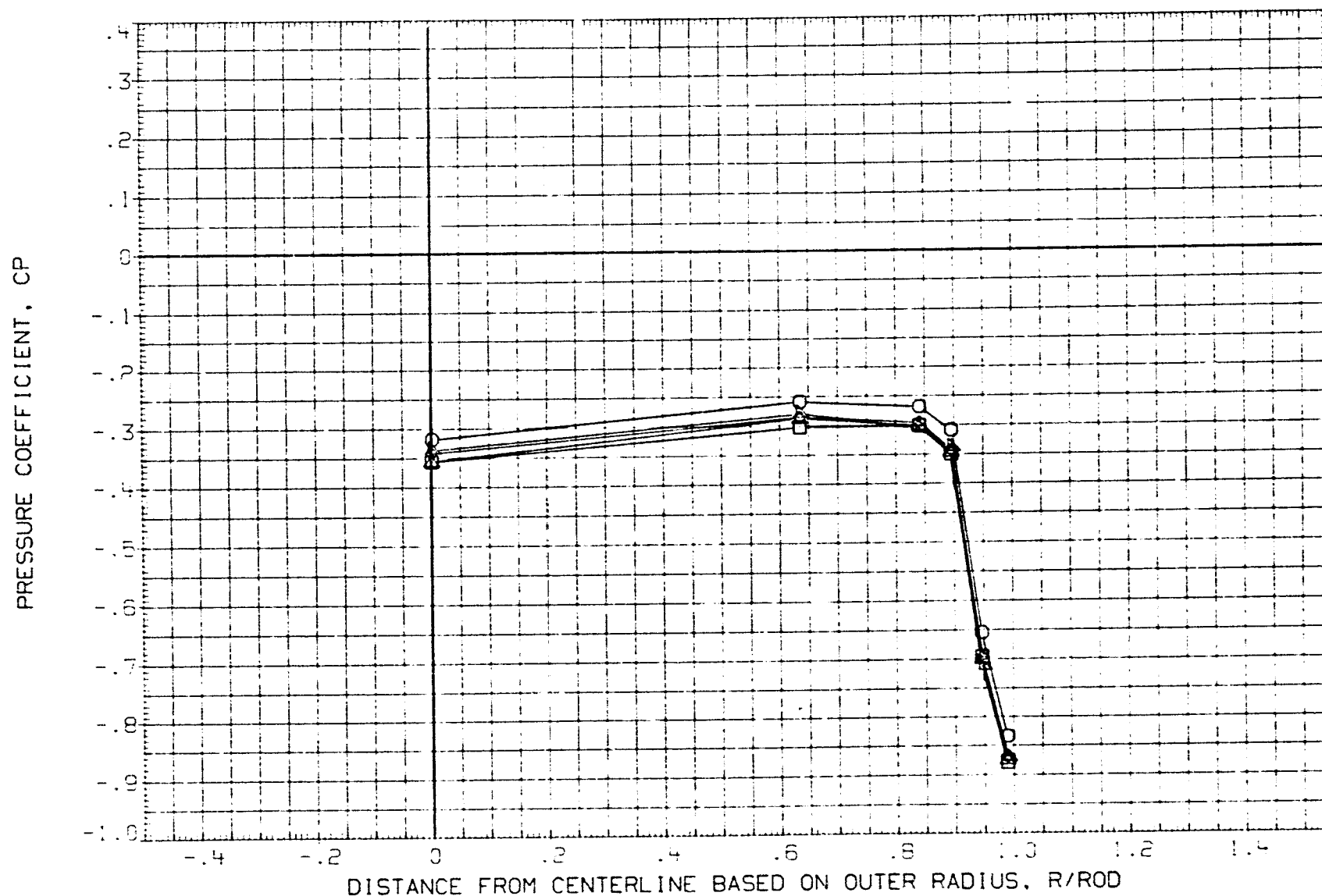


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H28)	○	ARC11-0231AB0 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(AE4H20)	□	ARC11-0231AB0 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231AB0 OTS(SRB=N ORB=N*) ET BASE	.000	.000	.600	3.400
(AE4HB5)	△	ARC11-0231AB0 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.600	3.400
(AE4HB0)	▽	ARC11-0231AB0 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.600	3.400

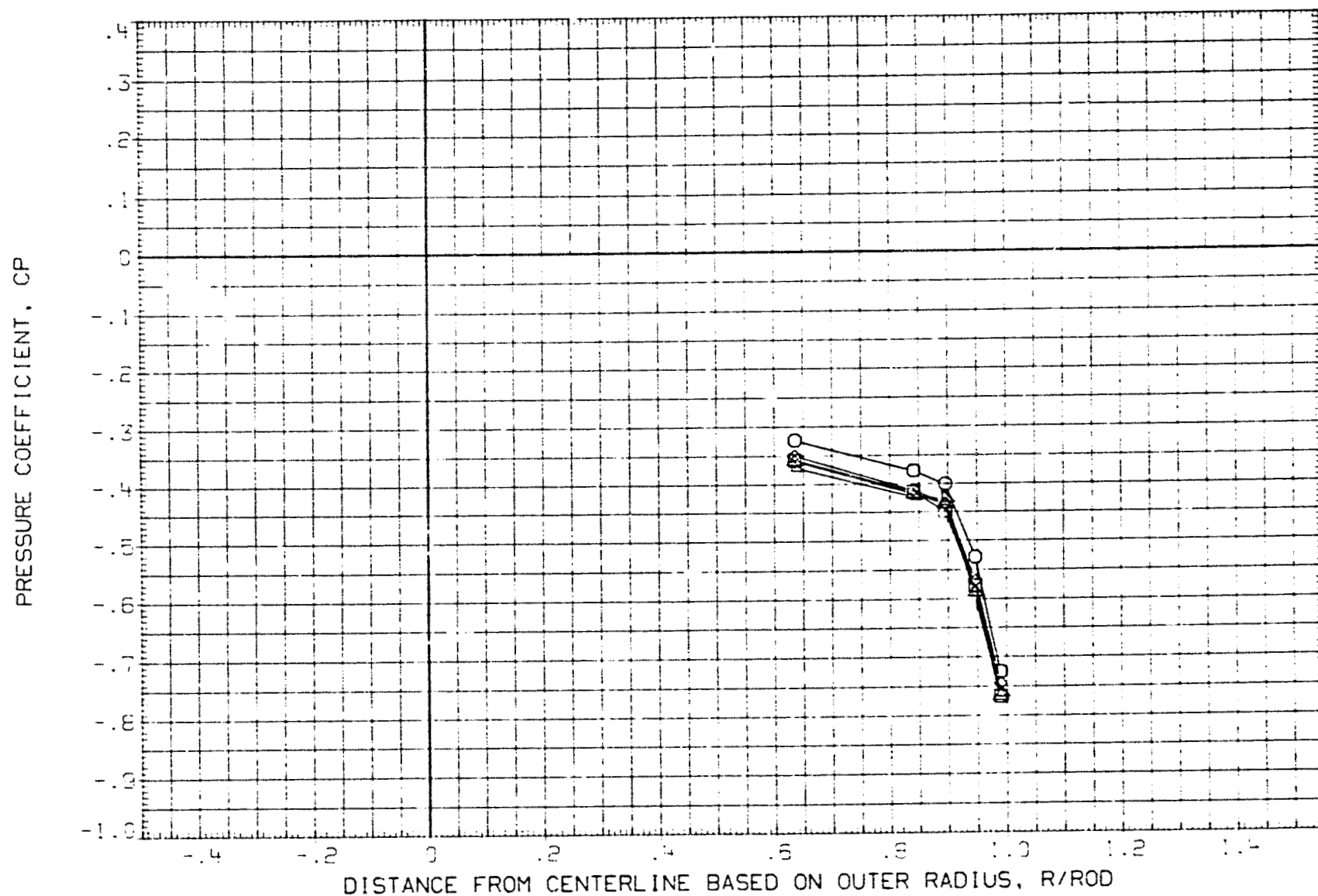


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = .000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB-OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(AE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(AE4H95)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.600	3.400
(AE4H30)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.600	3.400

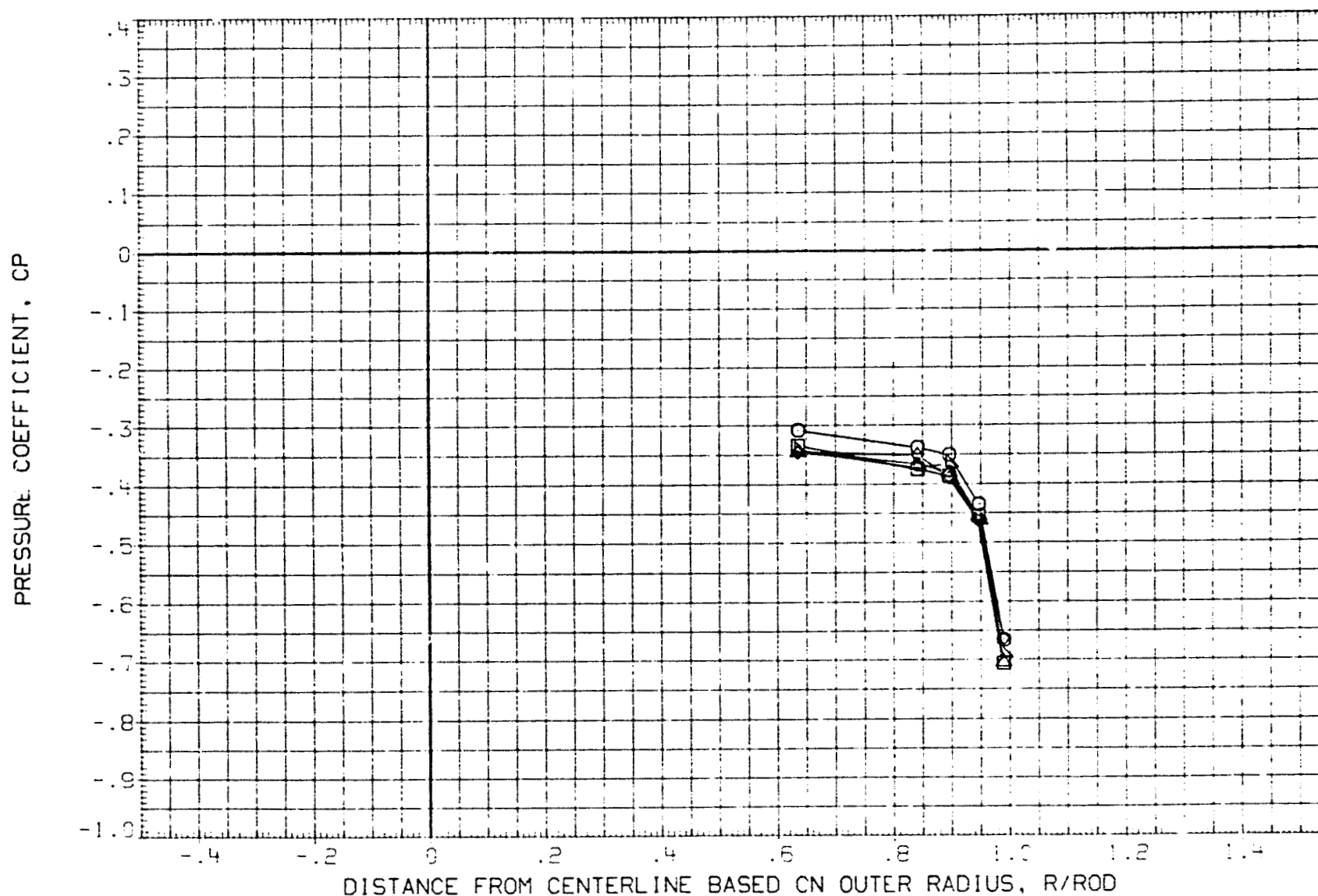


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(AE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(AE4HB5)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.600	3.400
(AE4HB0)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.600	3.400

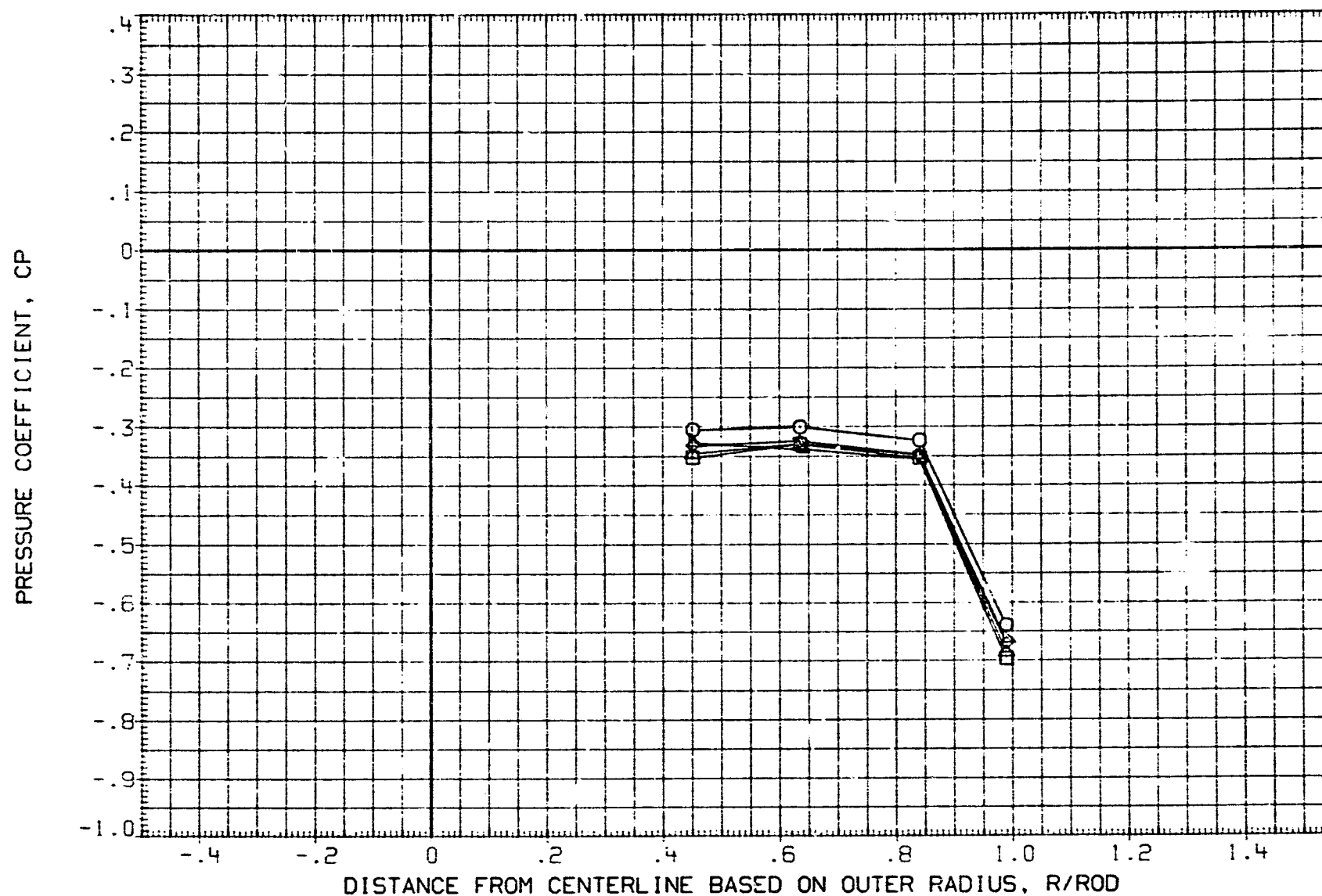


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RV/L
(AF4H28)	○	ARC11-0231A80 OTS(SPB=OFF ORB=OFF) ET BASE	.000	.000	600	3.400
(AF4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	600	3.400
(AF4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	600	3.400
(AF4HB5)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	600	3.400
(AF4HB0)	▽	ARC11-0231A80 OTS(SPB=N ORB NO.2 OUT)ET BASE	.000	.000	600	3.400

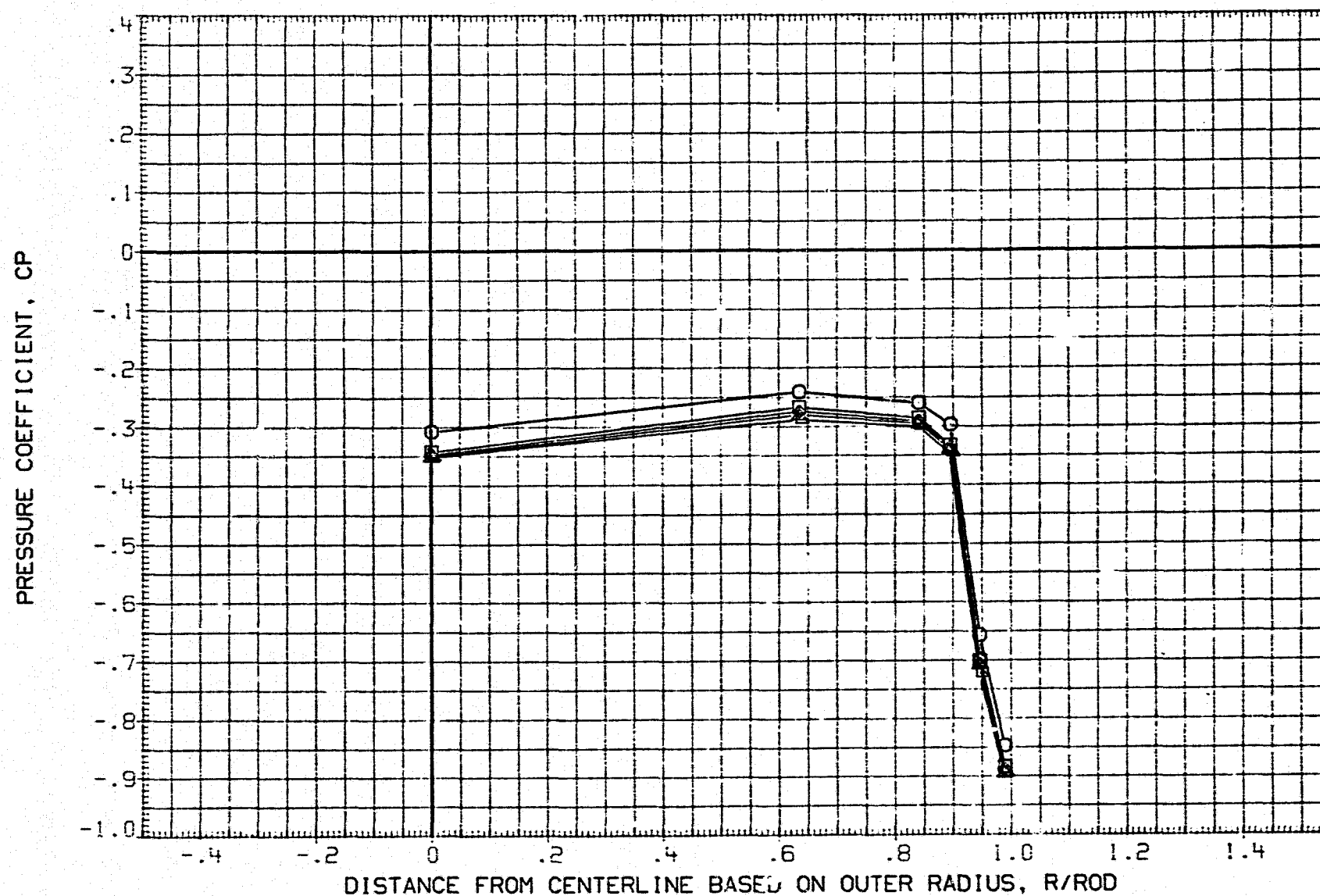


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H28)	○	ARC11-0231A80 OTS(SRB=OFF OPB=OFF) ET BASE	.000	.000	.600	3.400
(AL4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(AE4HB5)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.600	3.400
(AE4HB0)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.600	3.400

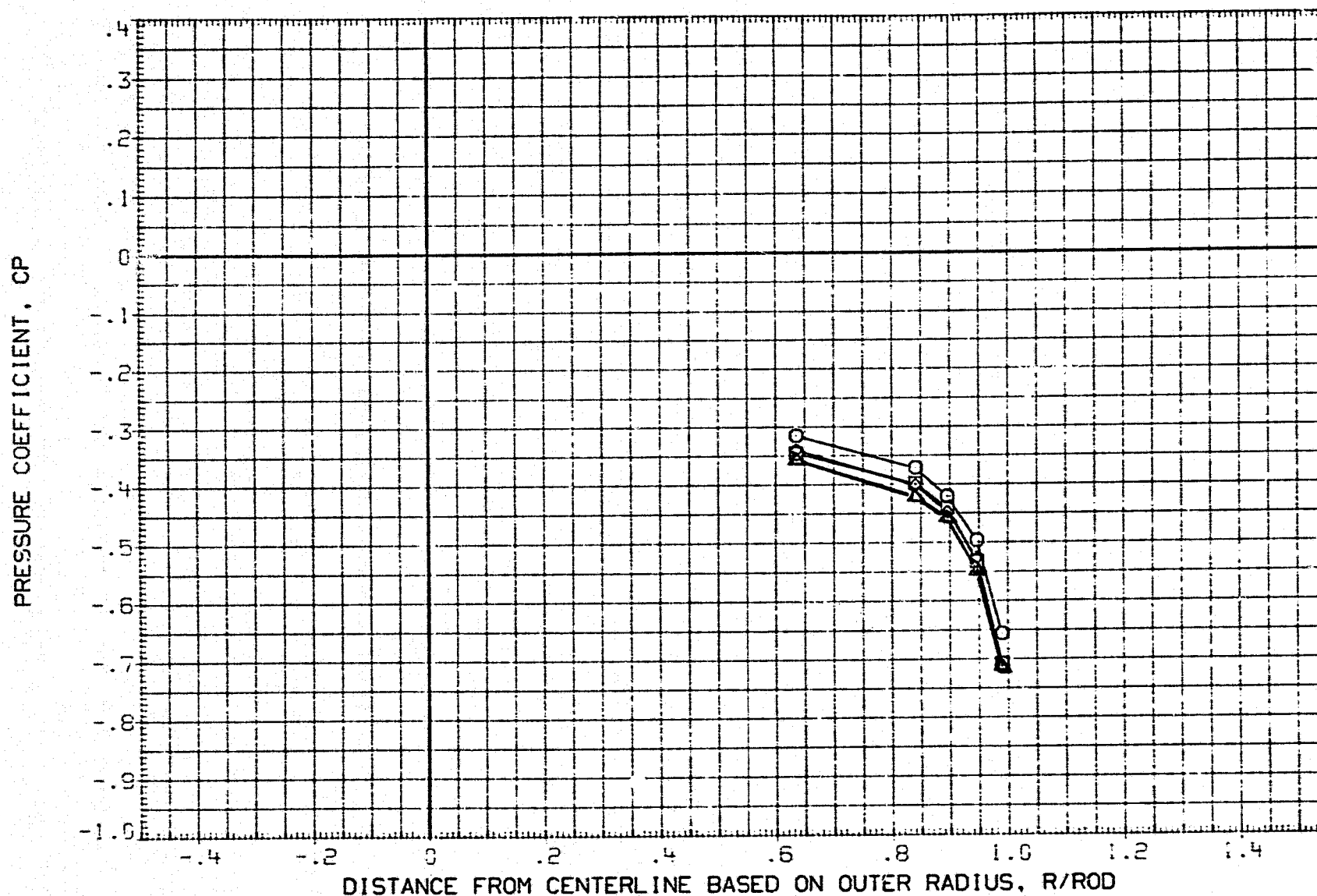


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(AE4H29)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231A80 OTS(SRB=N CPB=N+) ET BASE	.000	.000	.600	3.400
(AE4H85)	△	ARC11-0231A80 OTS(SRB=N CPB NO.1 OUT)ET BASE	.000	.000	.600	3.400
(AE4H80)	▽	ARC11-0231A80 OTS(SRB=N CPB NO.2 OUT)ET BASE	.000	.000	.600	3.400

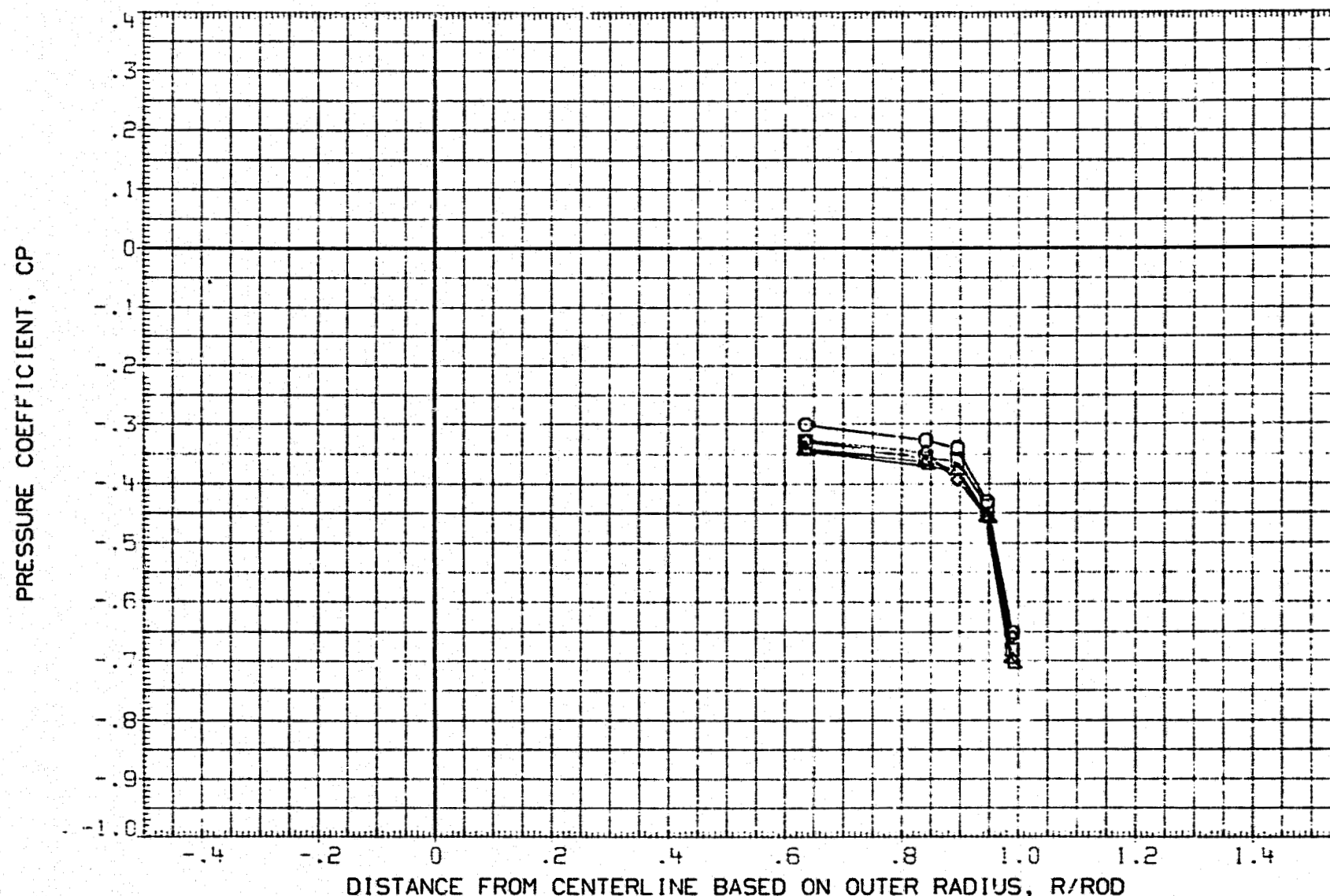


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L
(AE4H28)	○	ARC11-0231A80 OTS(SRB-OFF ORB-OFF) ET BASE	.000	.000	.600	3.400
(AE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(AE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N*) ET BASE	.000	.000	.600	3.400
(AE4H05)	△	ARC11-0231A80 OTS(SRB=N CRB NO.1 OUTLET BASE	.000	.000	.600	3.400
(AE4H00)	▽	ARC11-0231A80 OTS(SRB=N CRB NO.2 OUTLET BASE	.000	.000	.600	3.400

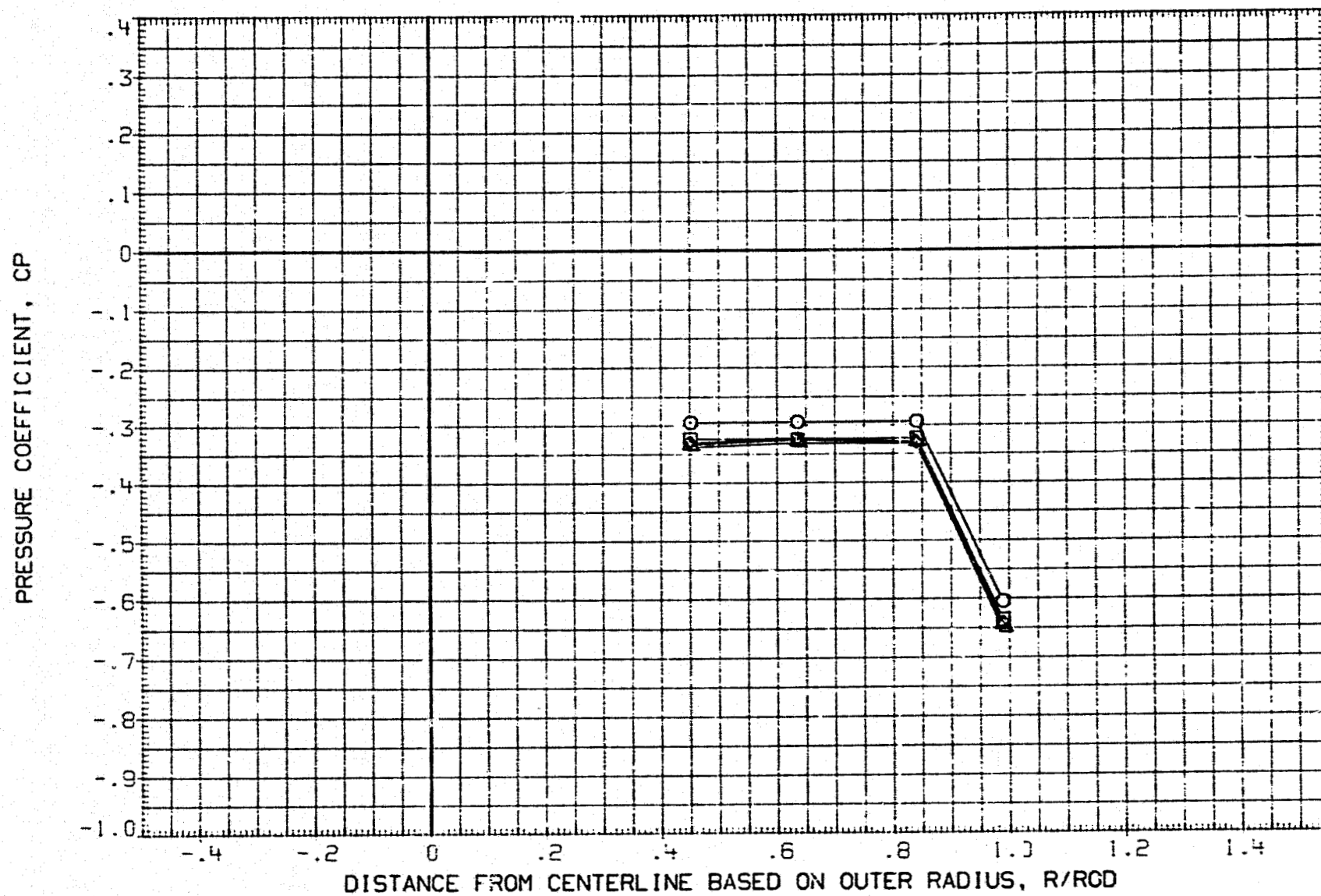


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = 4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(BE4H95)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.600	3.400
(BE4H80)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.600	3.400

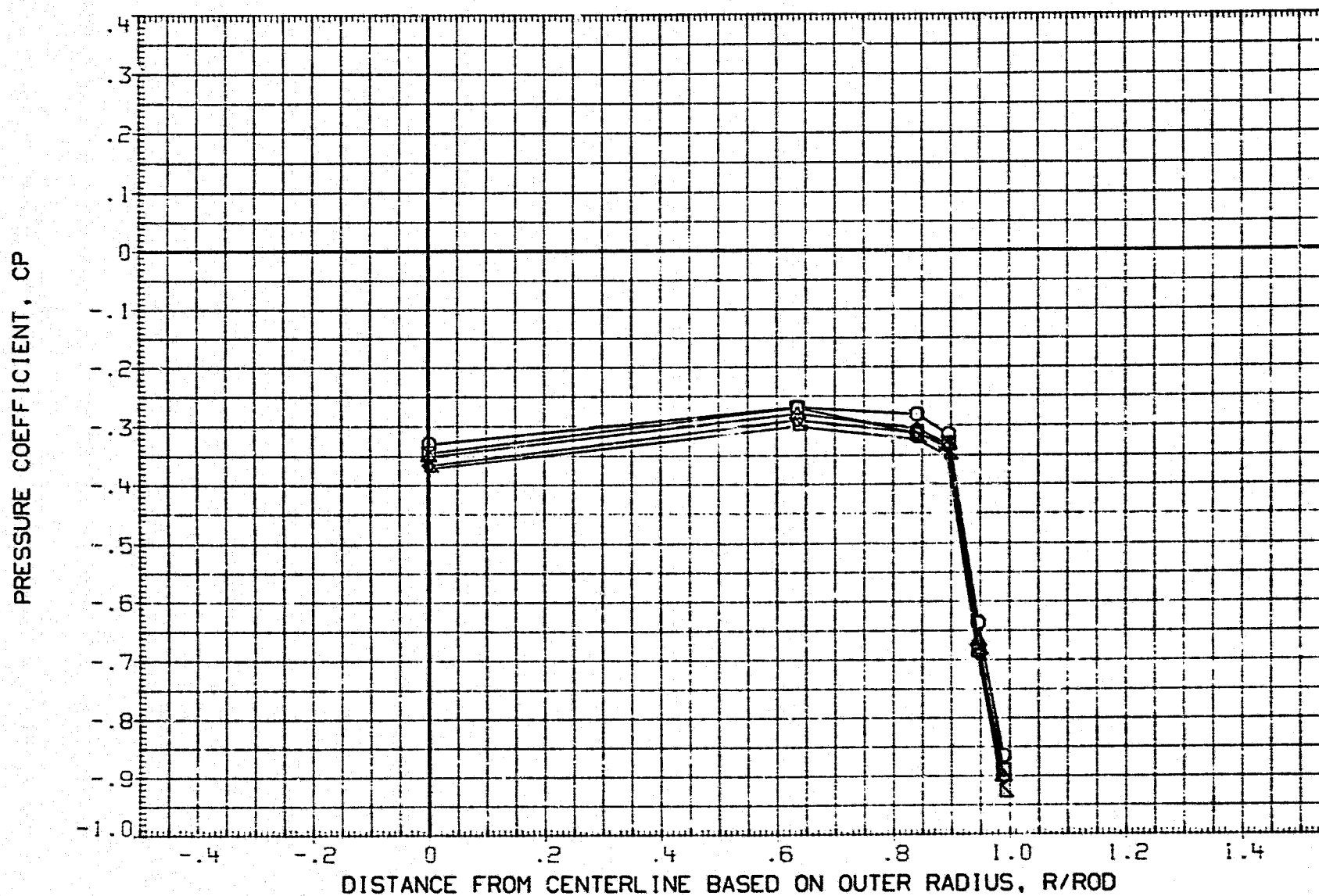


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(BE4H05)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTJET BASE	.000	.000	.600	3.400
(BE4H00)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTJET BASE	.000	.000	.600	3.400

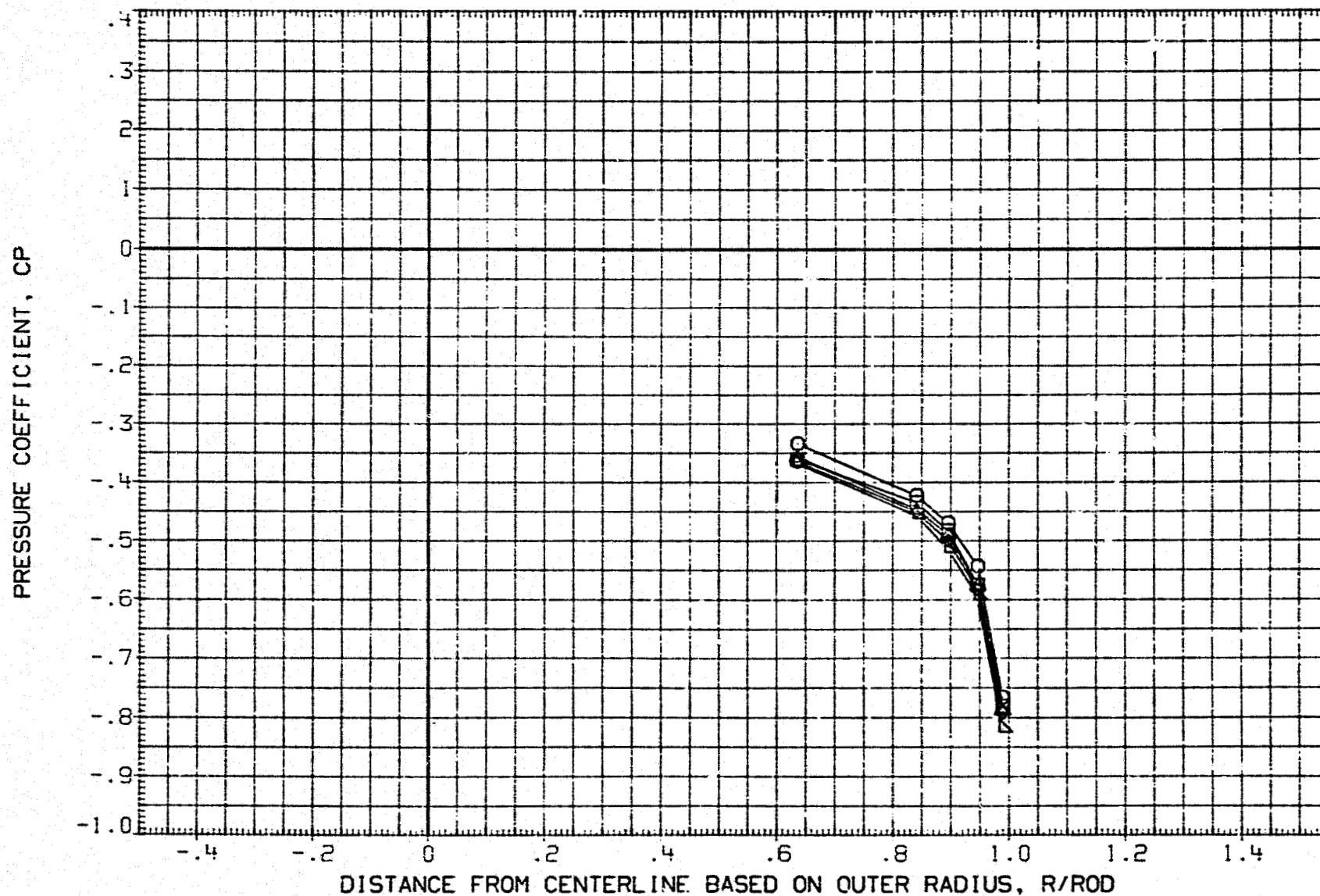


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -4.000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(BE4H35)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.600	3.400
(BE4H30)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.600	3.400

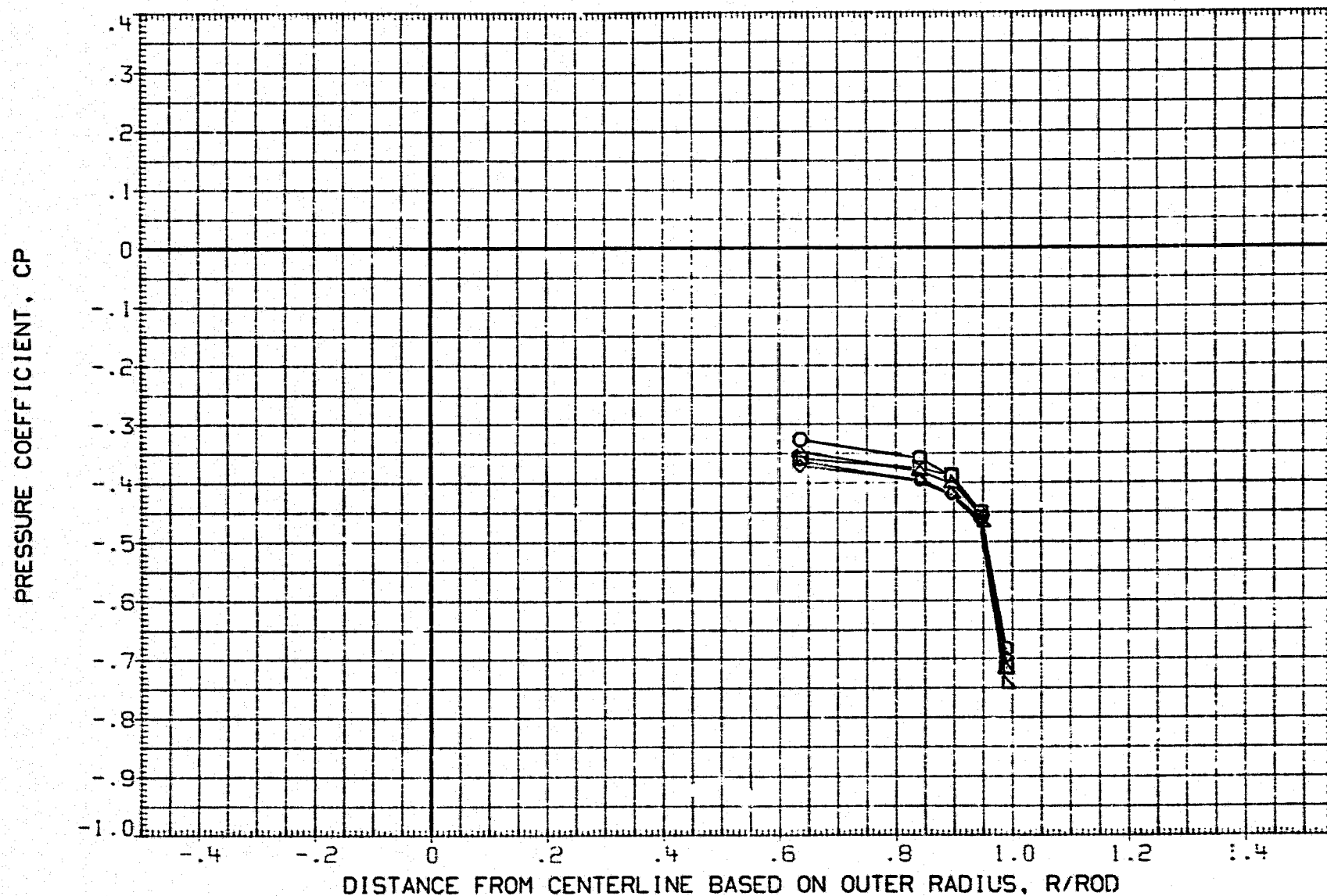


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -4.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 O1S(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H95)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.600	3.400
(BE4H80)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.600	3.400

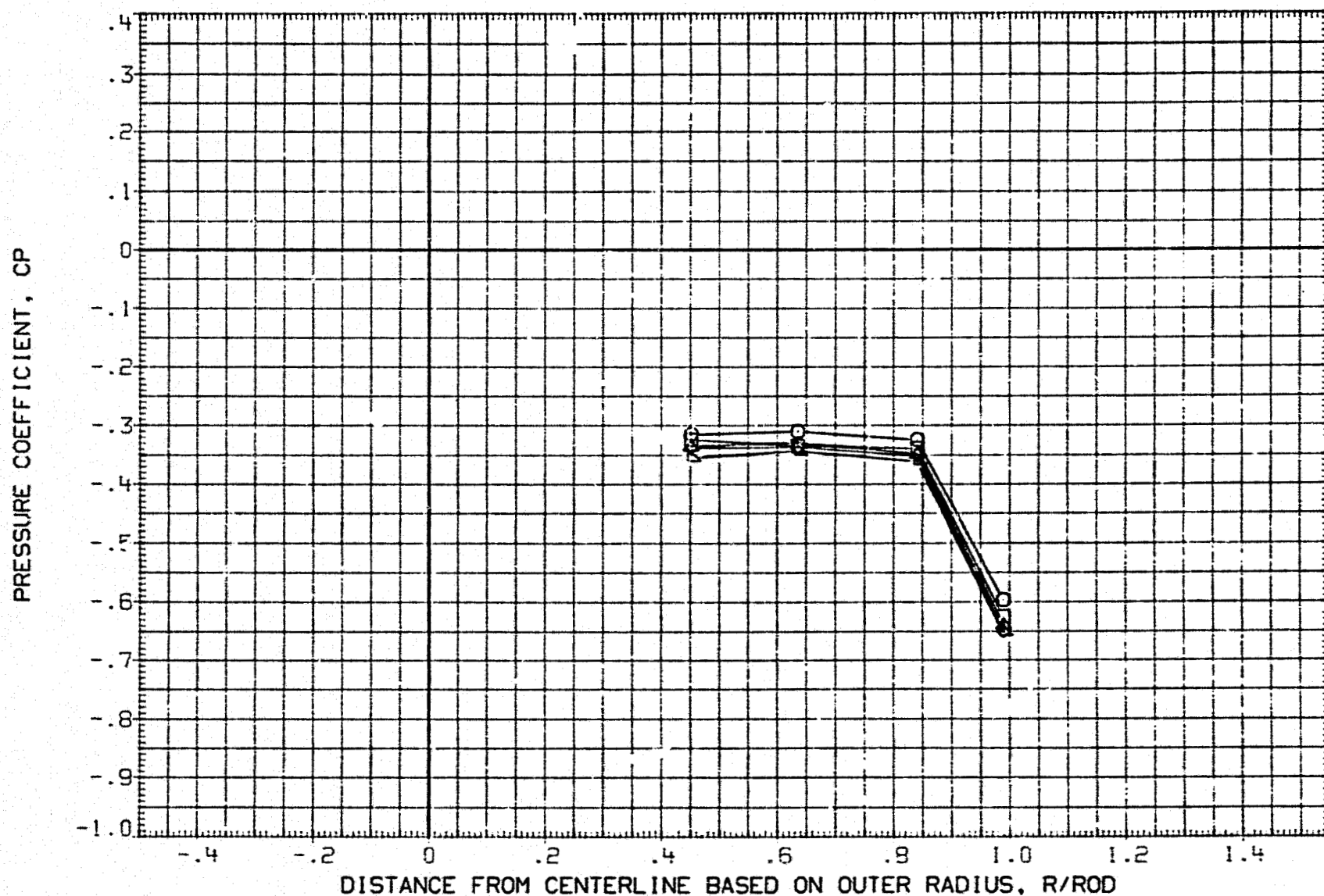


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = -4.000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(BE4HB5)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.600	3.400
(BE4HB0)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.600	3.400

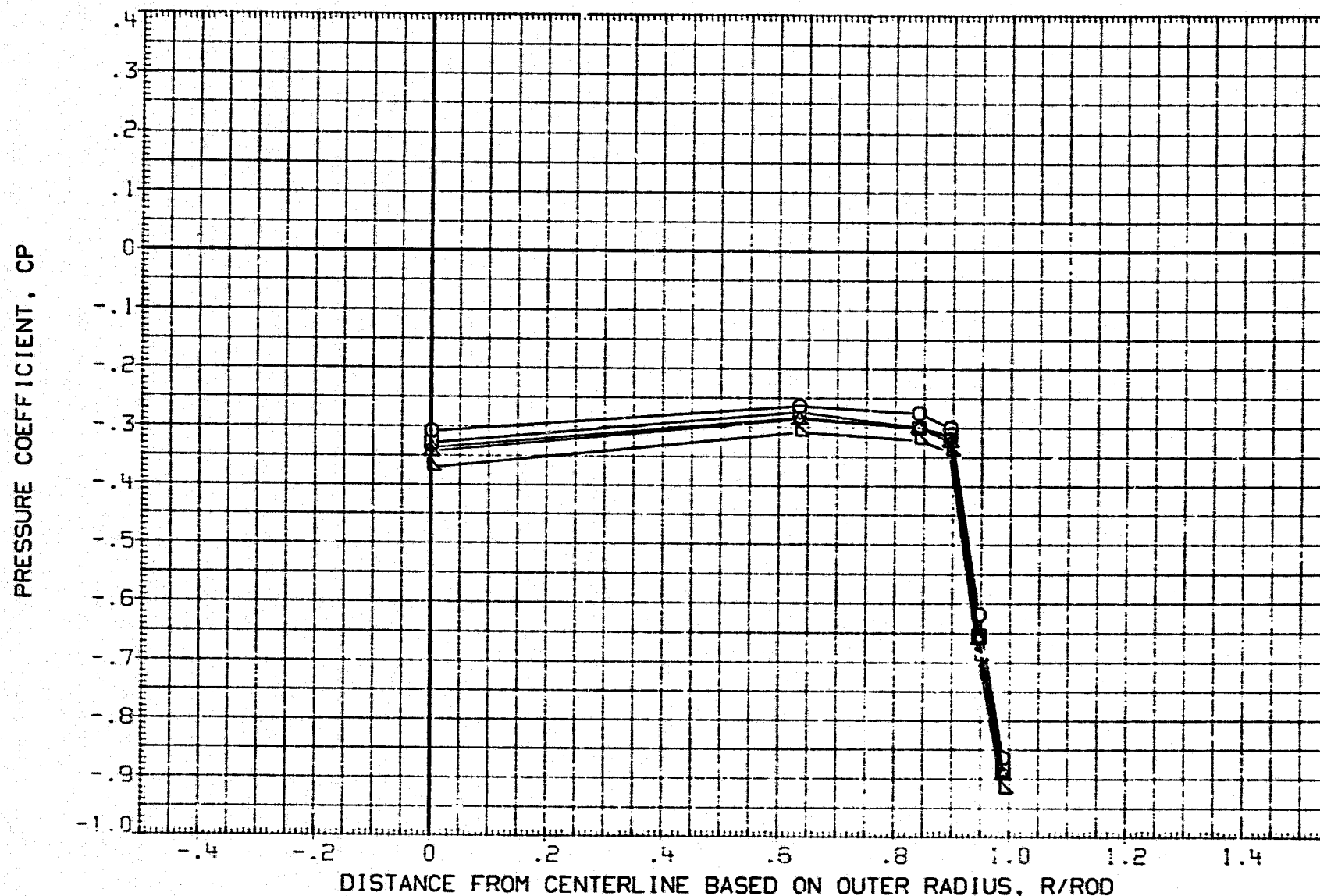


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N OPB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N OPB=N) ET BASE	.000	.000	.600	3.400
(BE4H05)	△	ARC11-0231A80 OTS(SRB=N OPB NO.1 OUTLET BASE	.000	.000	.600	3.400
(BE4H00)	▽	ARC11-0231A80 OTS(SRB=N CRB NO.2 OUTLET BASE	.000	.000	.600	3.400

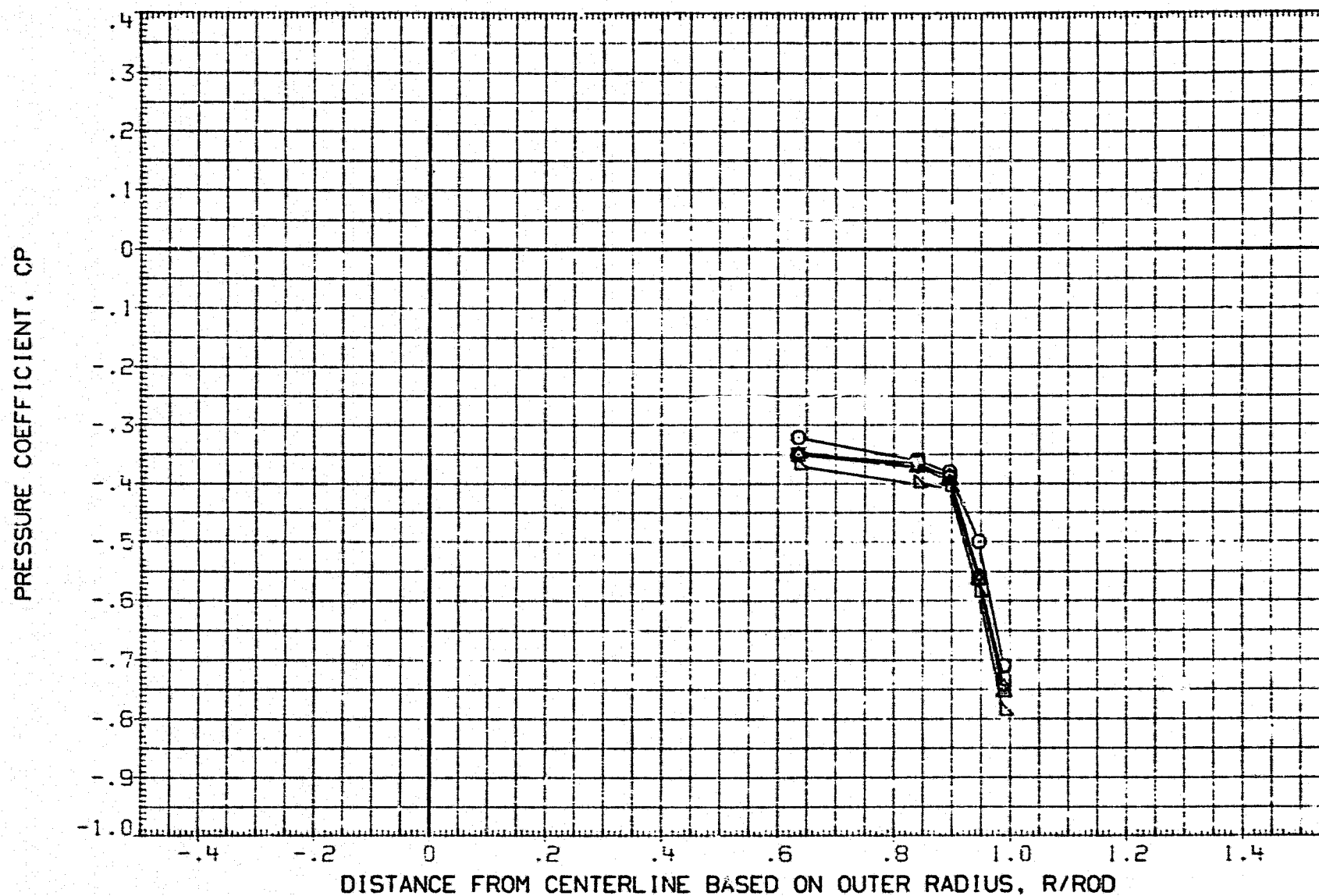


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(BE4HB5)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.600	3.400
(BE4HB0)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.600	3.400

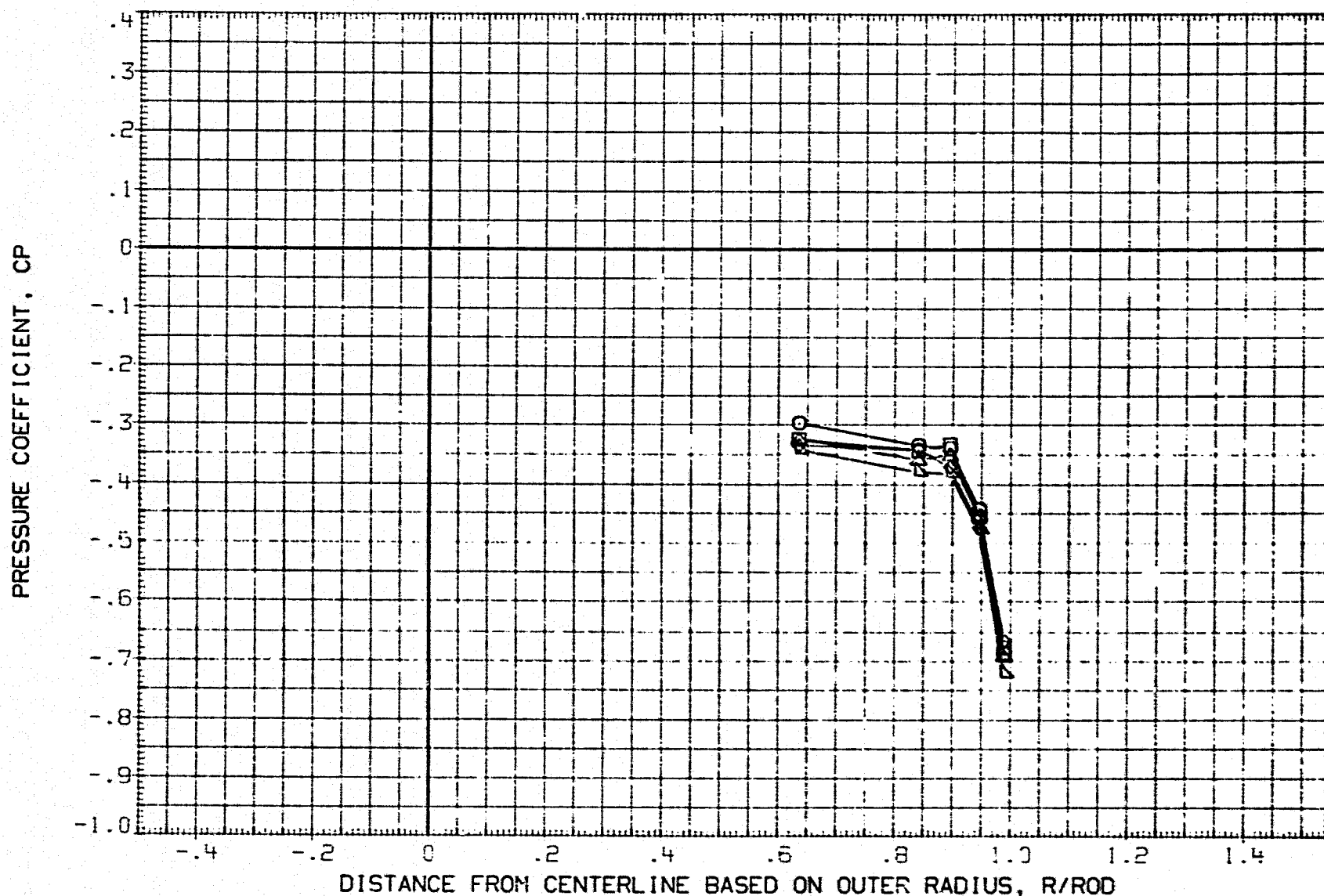


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H28)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.600	3.400
(BE4H20)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.600	3.400
(BE4H11)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.600	3.400
(BE4H05)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.600	3.400
(BE4H00)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.500	3.400

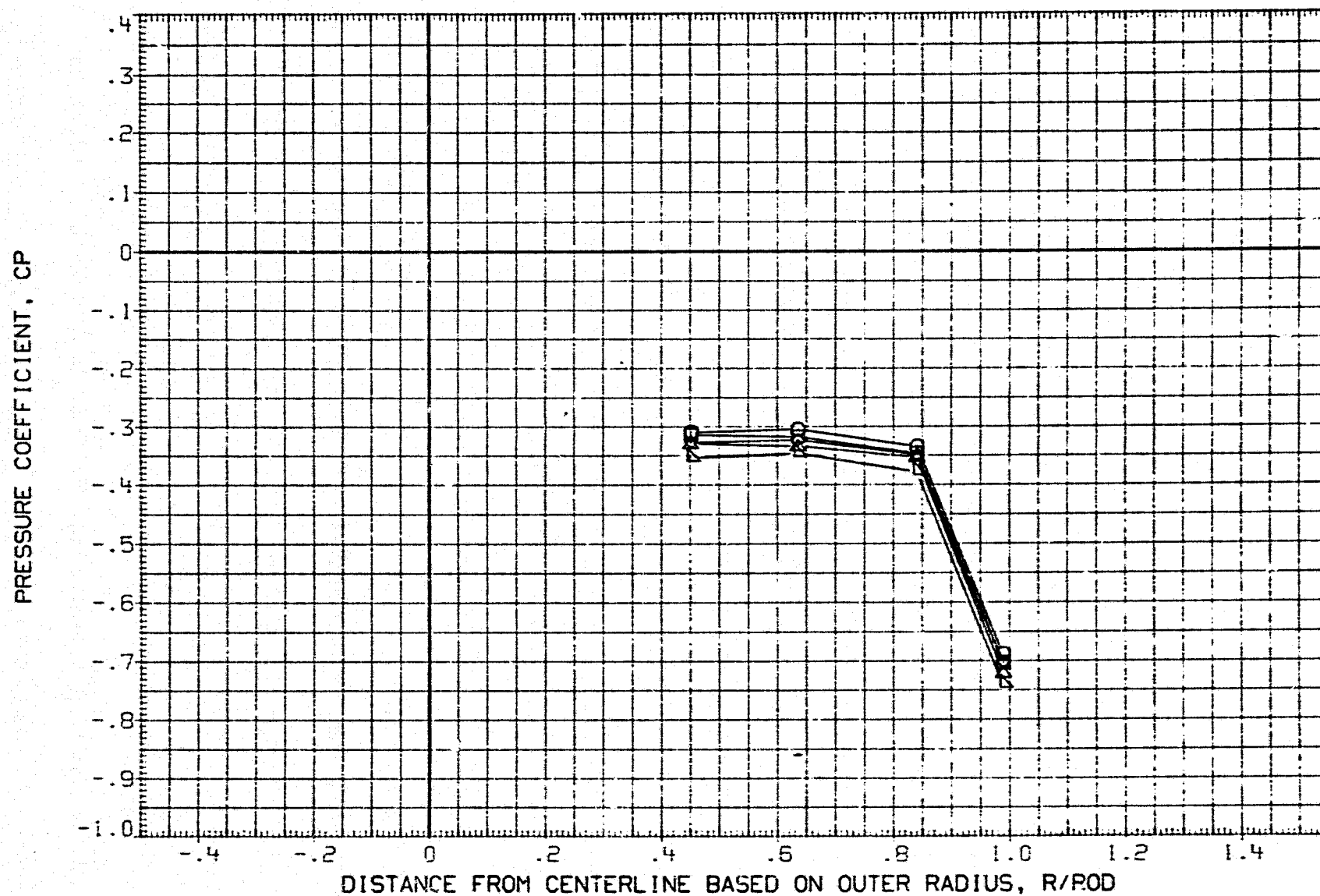


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.6

ALPHA = .000 BETA = 4.000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	□	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H36)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 C/T)ET BASE	.000	.000	.900	4.250
(AE4H31)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

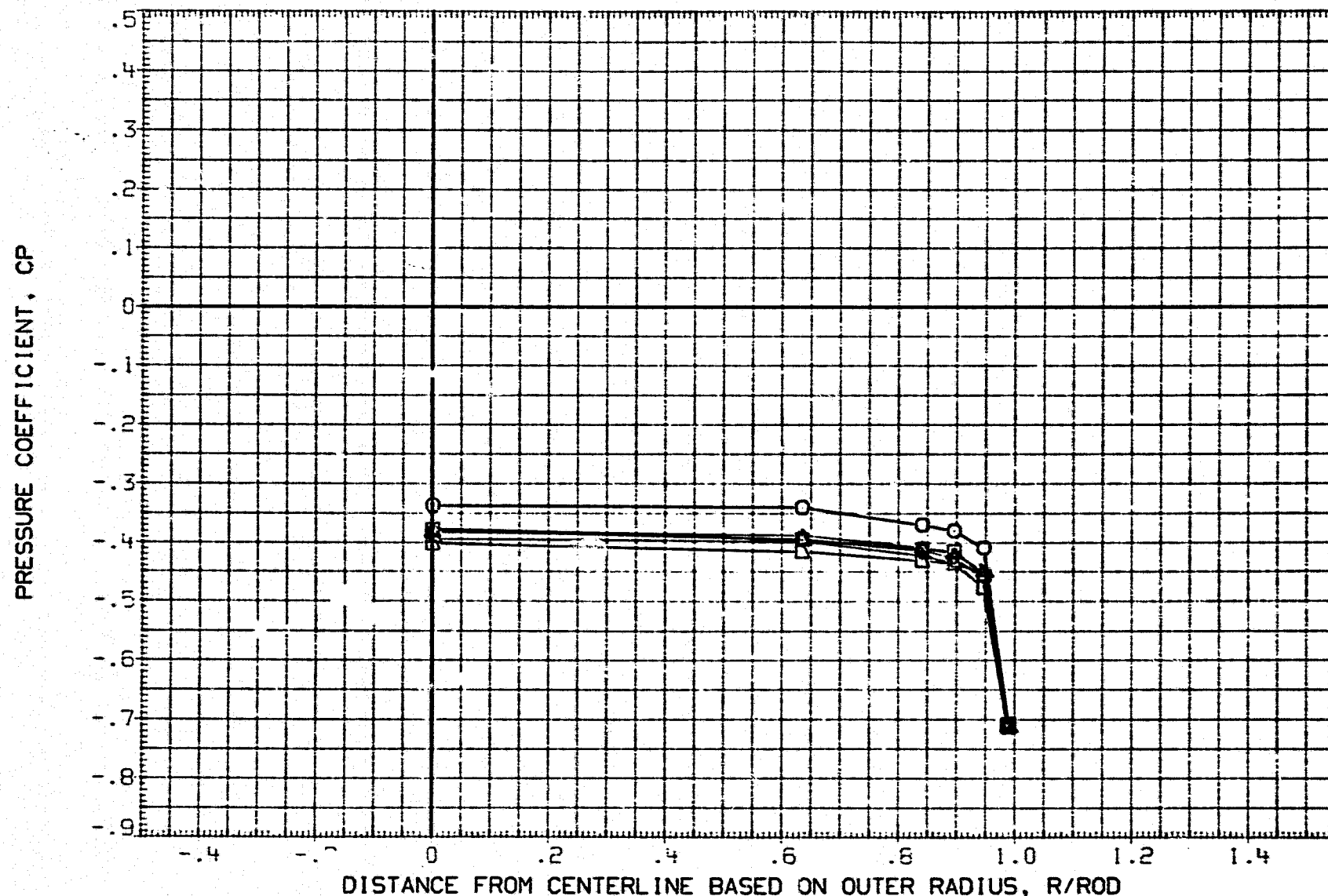


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-06	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=CFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N OPB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H66)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.003	.000	.900	4.250
(AE4H81)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

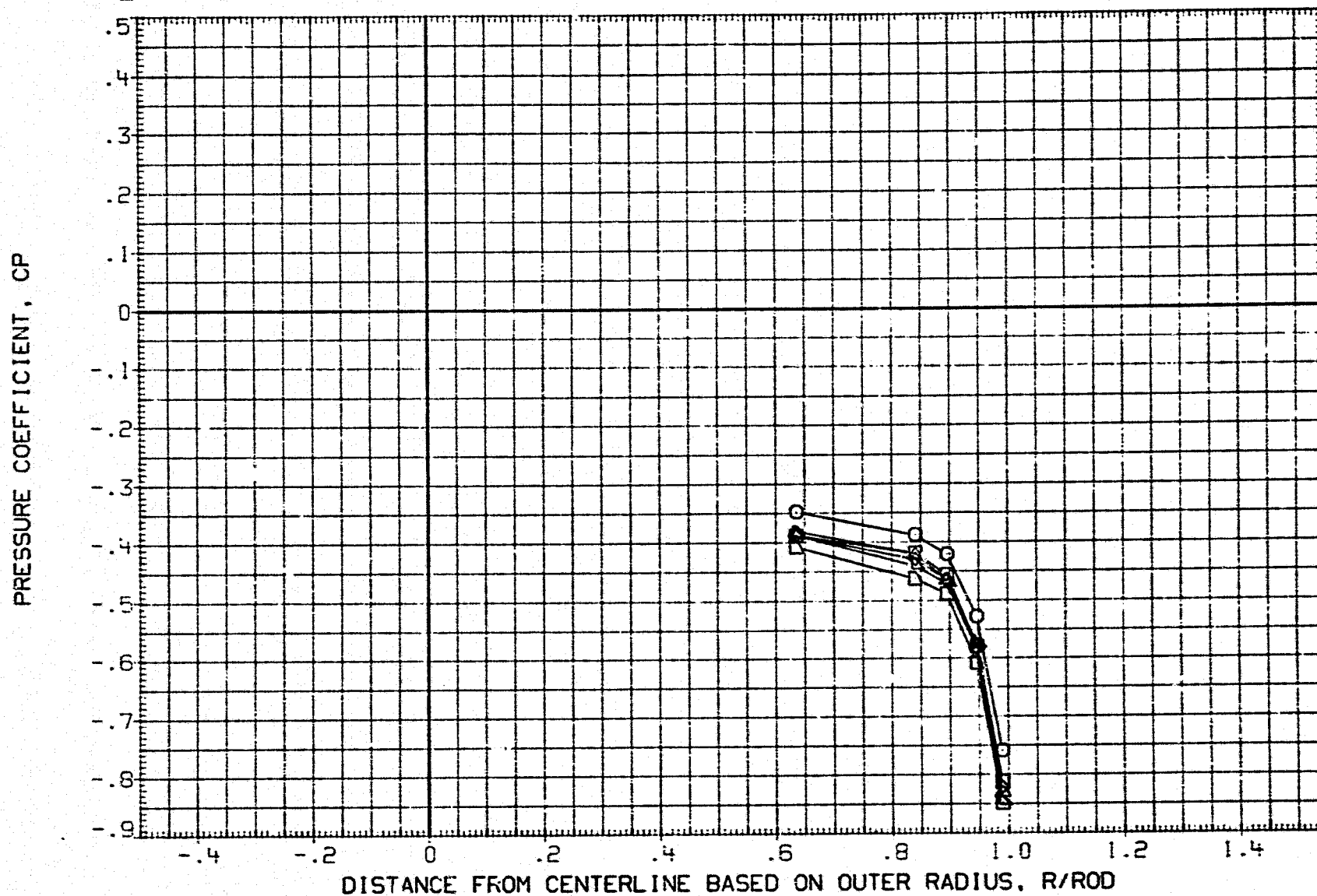


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-TB	ELV-OB	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4HB6)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4HB1)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.900	.000	.900	4.250

PRESSURE COEFFICIENT, CP

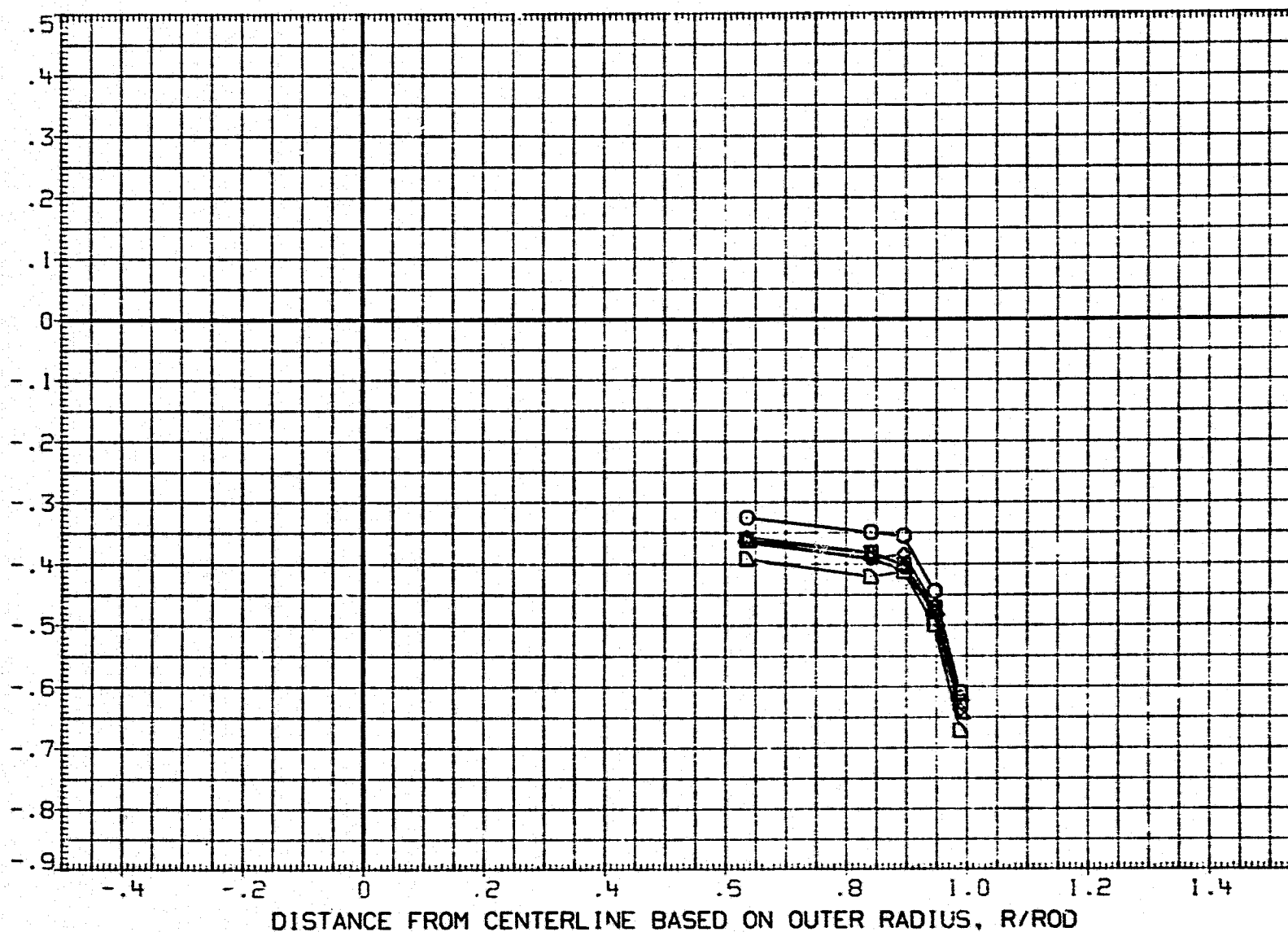


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = 180.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SPB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H86)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4H91)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

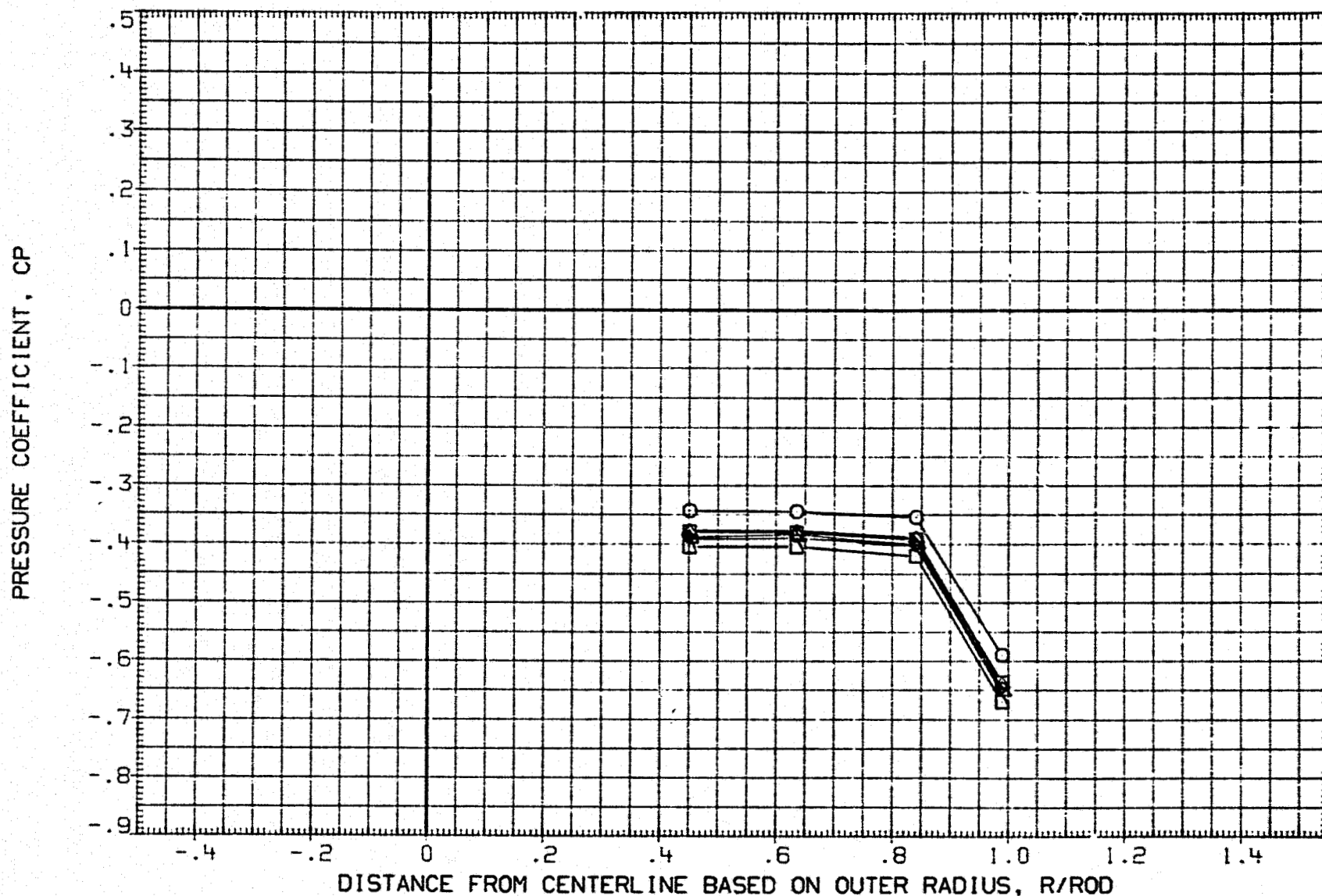


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = -4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	□	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H35)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4H31)	△	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

PRESSURE COEFFICIENT, CP

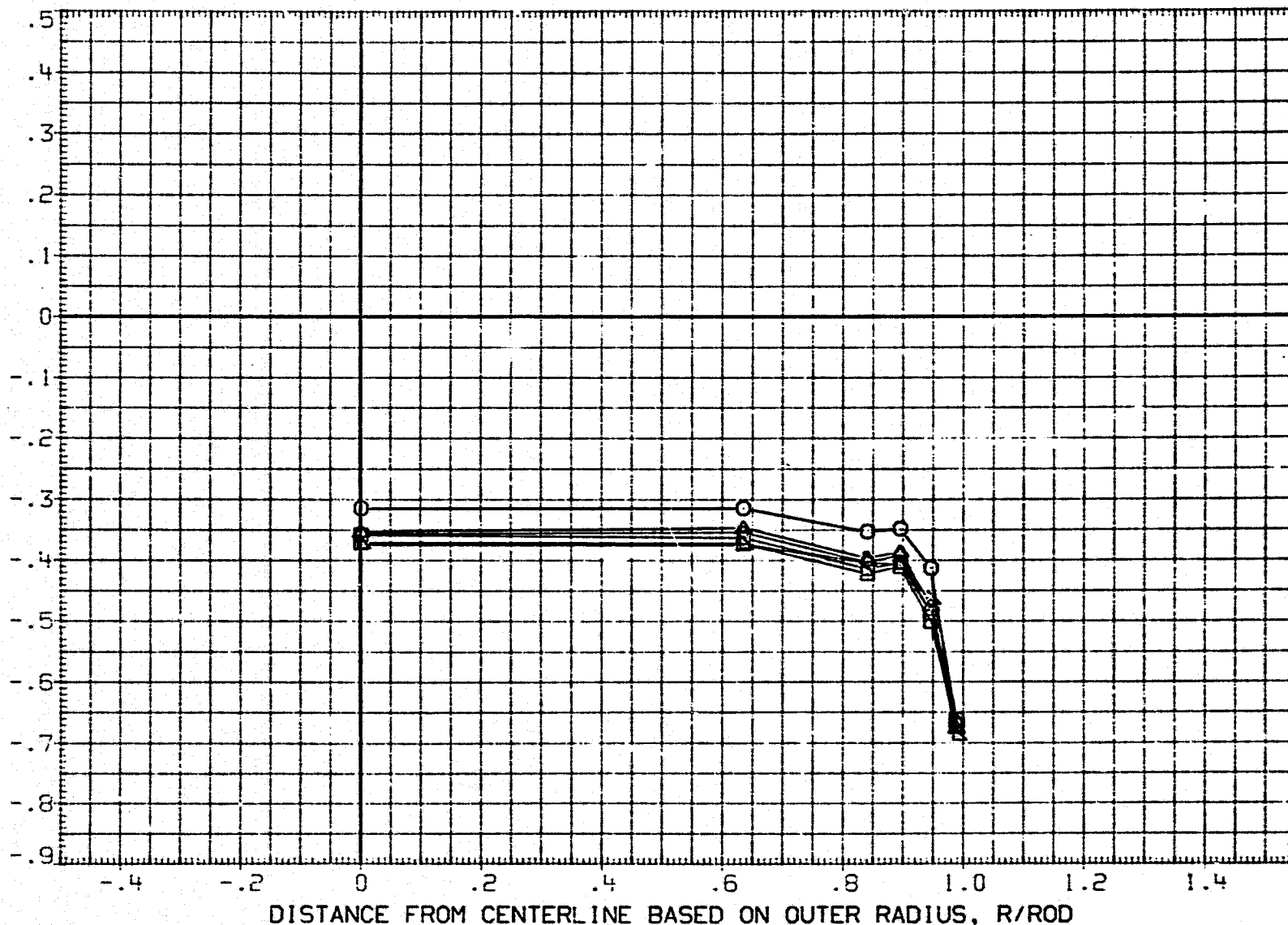


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = .000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H29)	○	ARC11-0231AB0 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231AB0 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231AB0 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231AB0 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4HB6)	▽	ARC11-0231AB0 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4HB1)	◇	ARC11-0231AB0 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

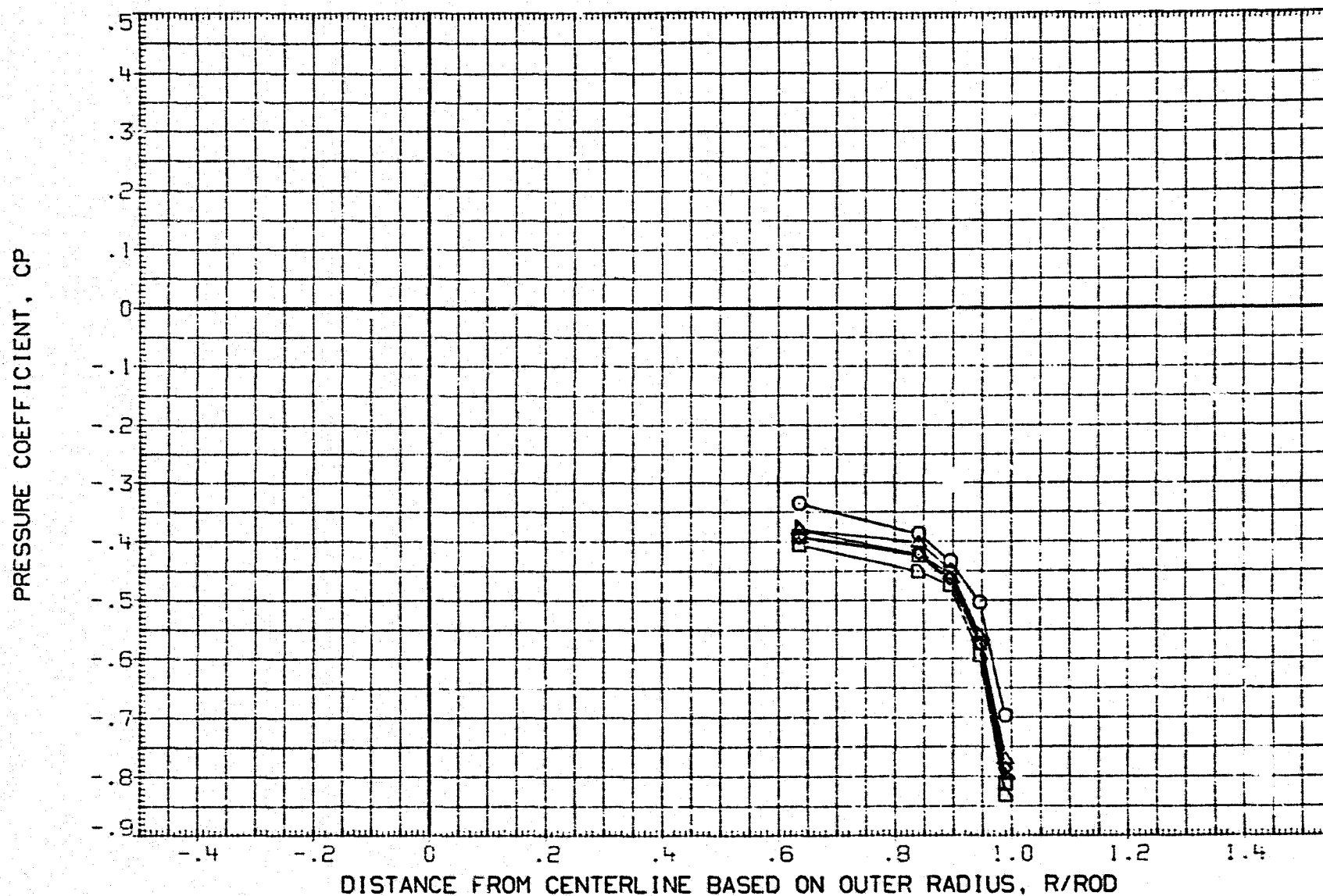


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AL4HB6)	▽	ARC11-0231A80 OTS(SRB=N OFB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4HB1)	◇	ARC11-0231A80 OTS(SRB=N OFB NO.2 OUT)ET BASE	.000	.000	.900	4.250

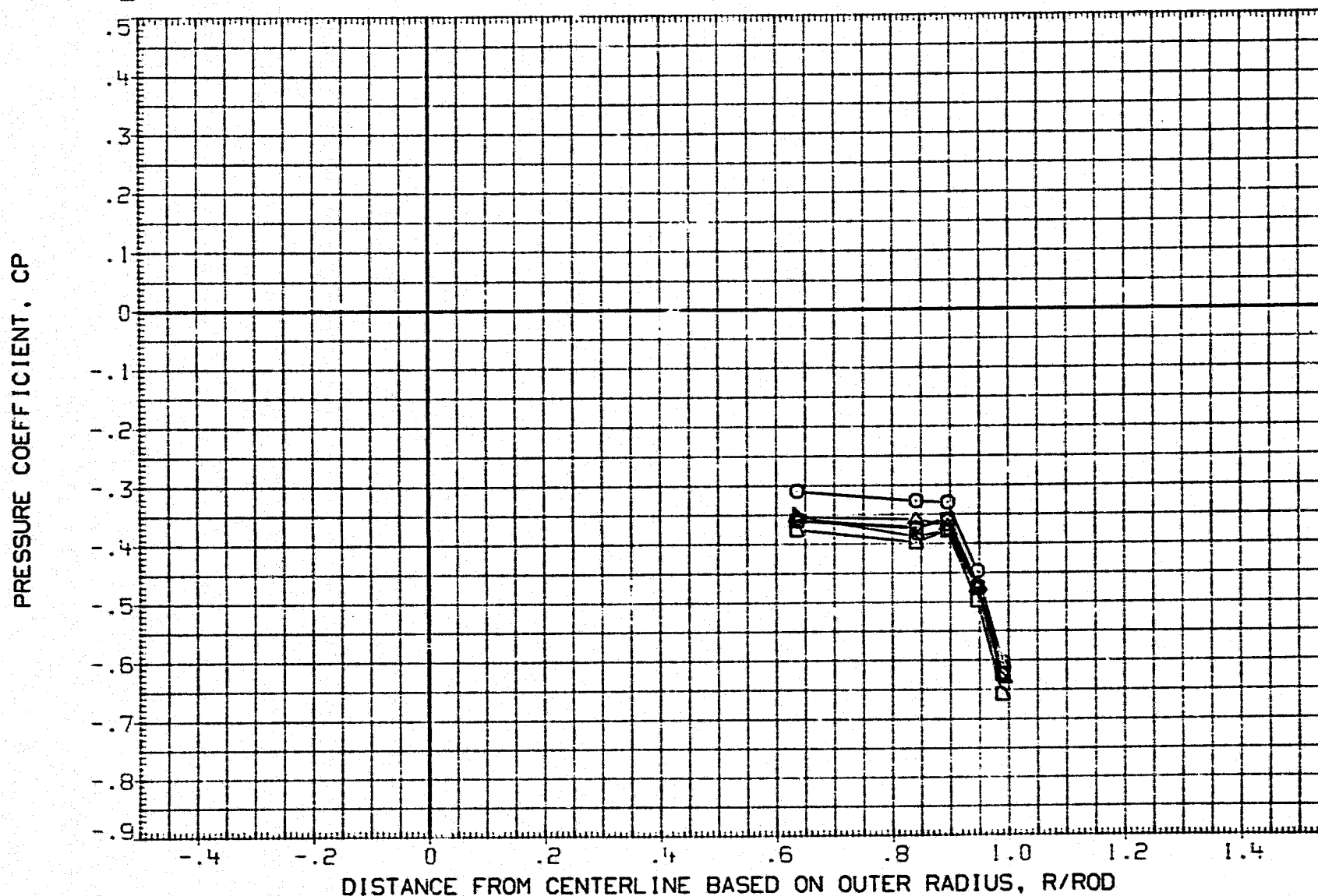


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4HB6)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4HB1)	D	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

PRESSURE COEFFICIENT, CP

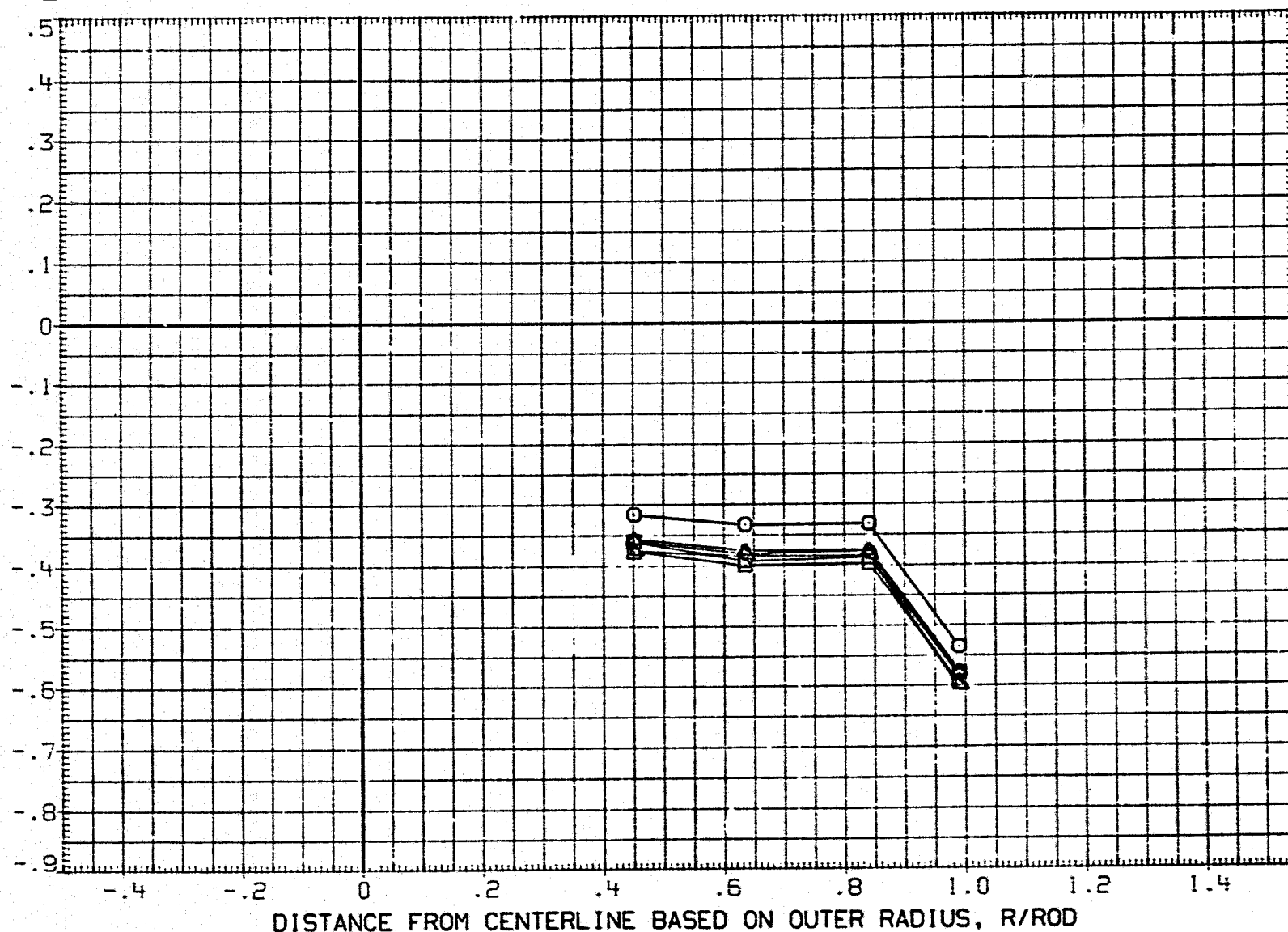


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF OPB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N OPB=N+) ET BASE	.000	.000	.900	4.250
(AE4H35)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.900	4.250
(AE4H31)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.900	4.250

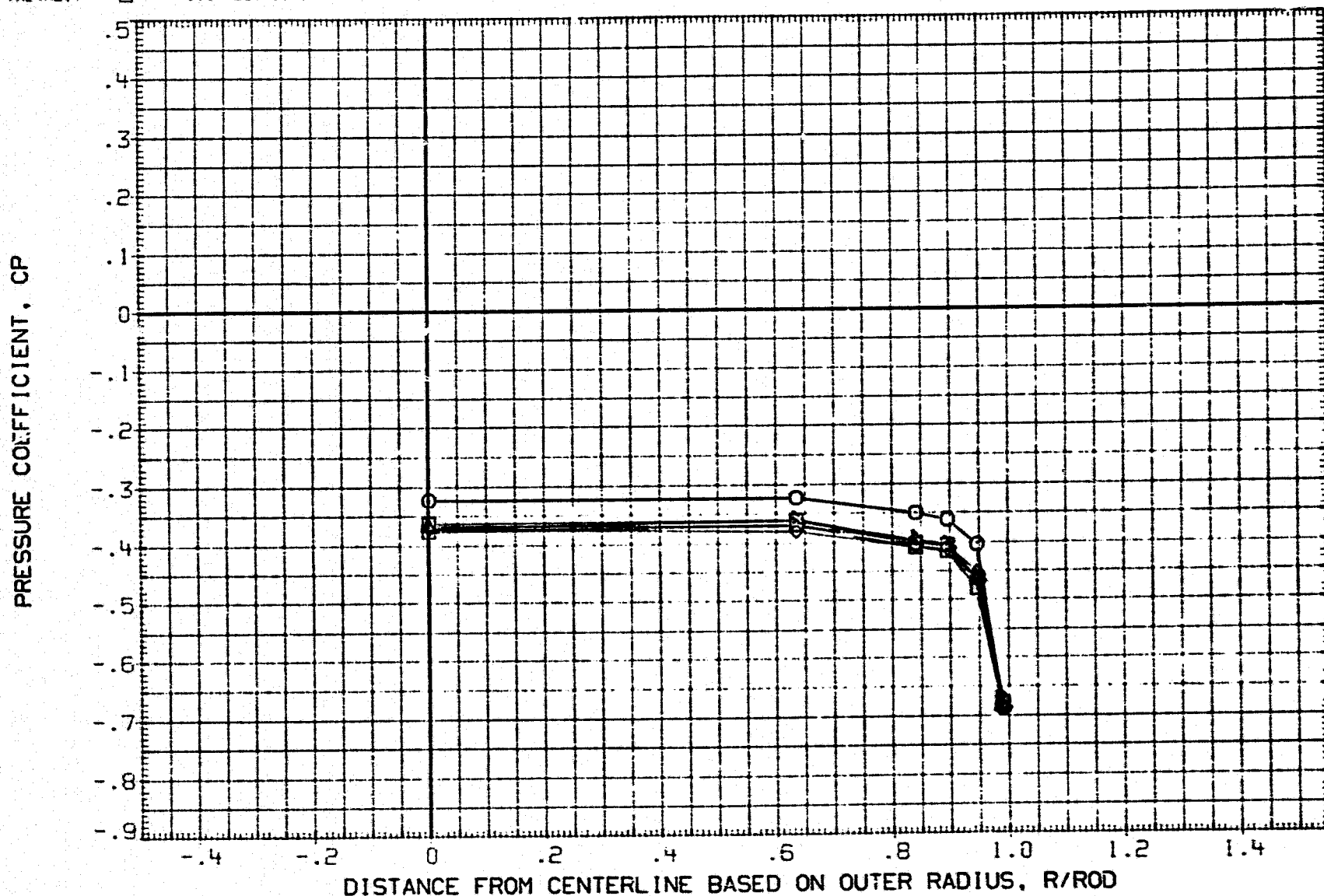


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H36)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4H31)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

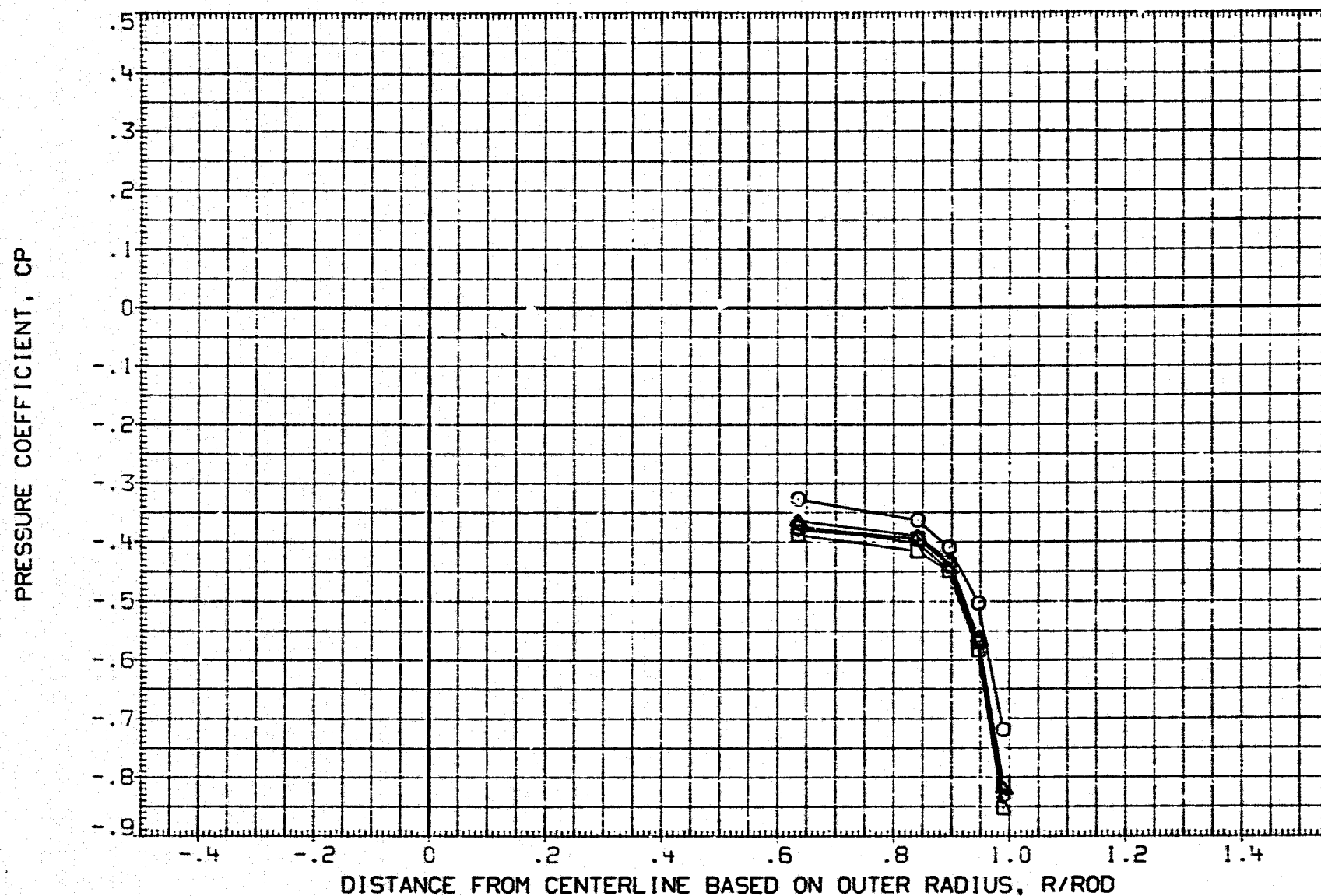


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = 4.000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H95)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(AE4H81)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

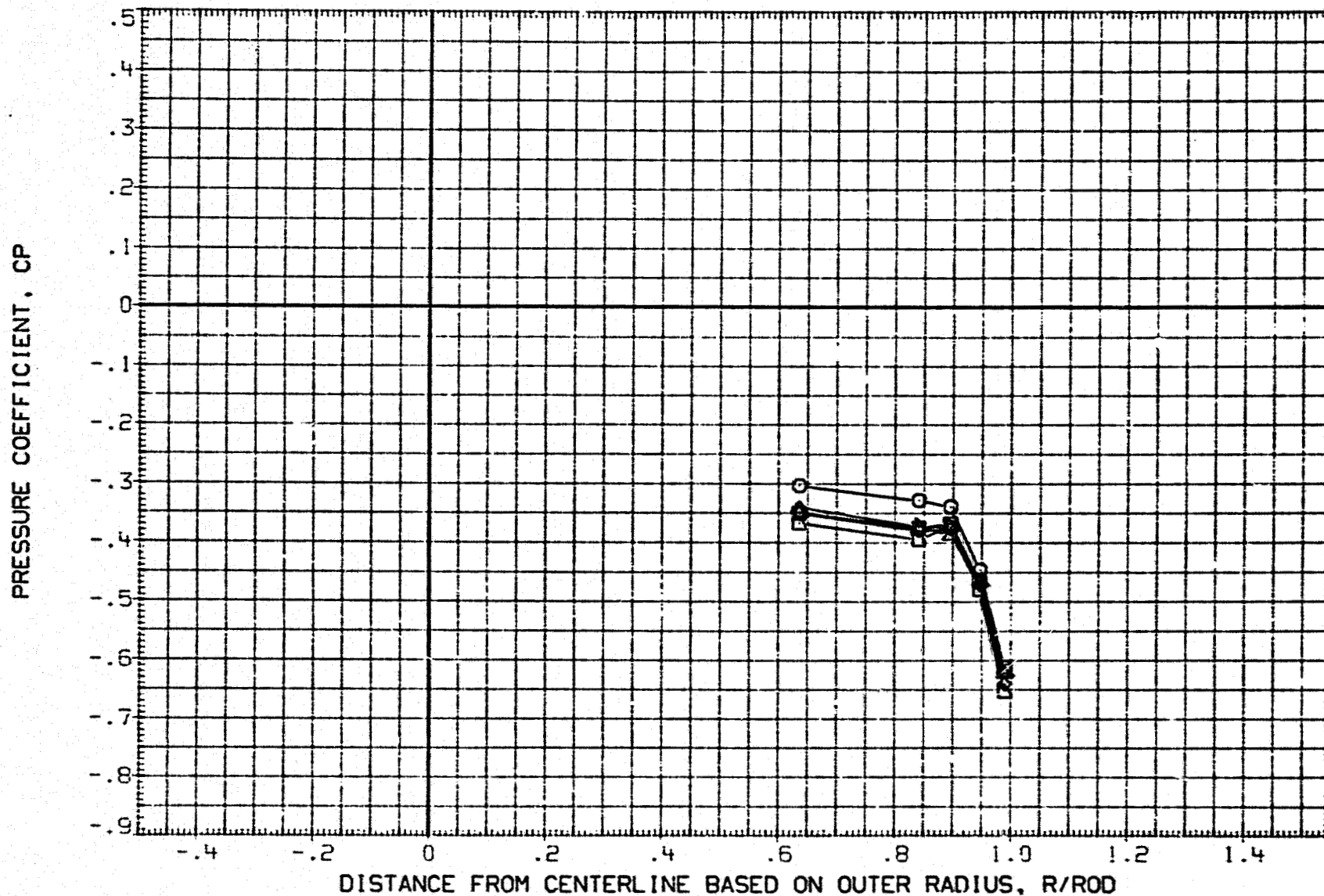


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	DN/L
(AE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(AE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(AE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(AE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(AE4H56)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.900	4.250
(AE4H31)	D	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.900	4.250

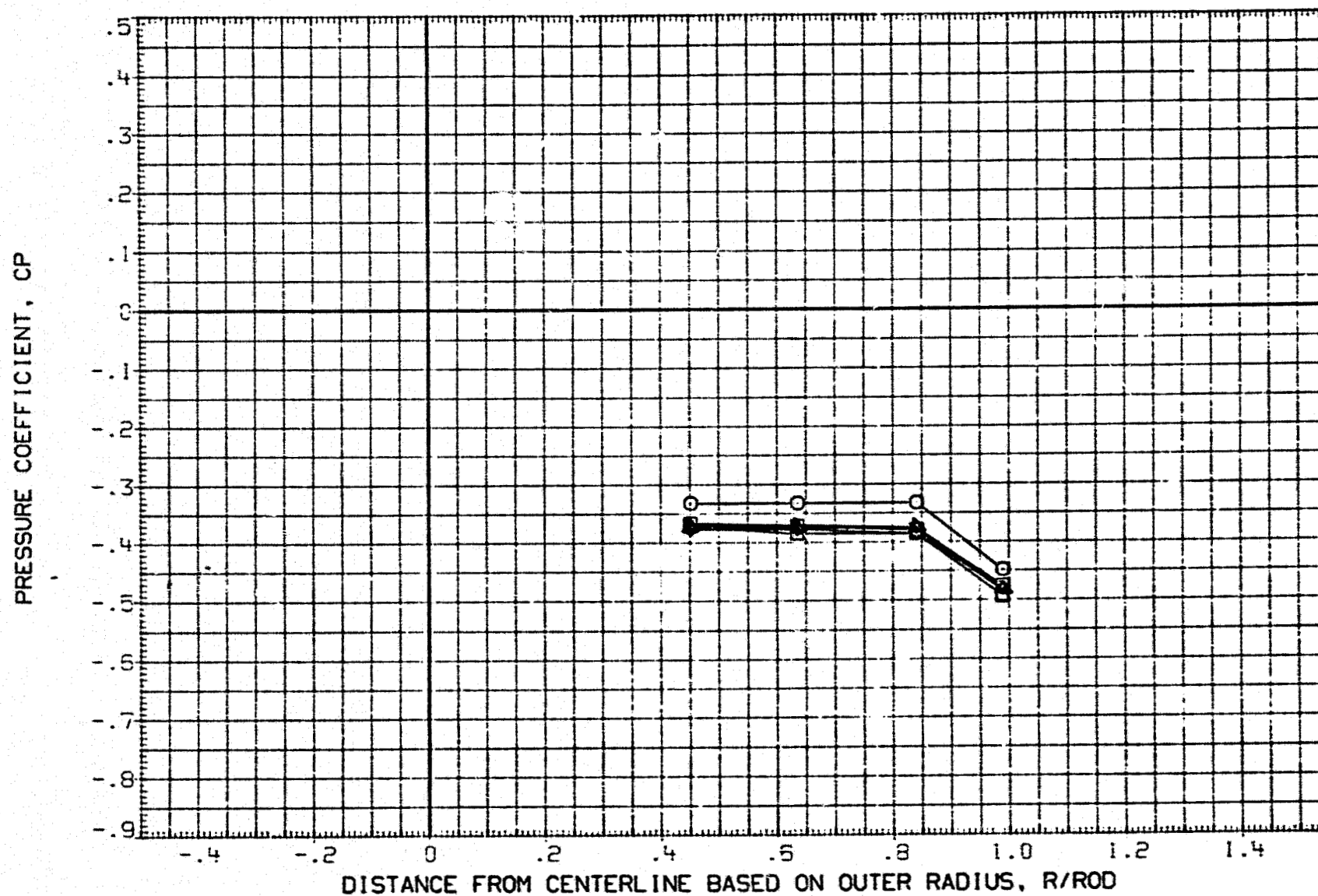


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = 4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N-1) ET BASE	.000	.000	.900	4.250
(BE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-1) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N-1) ET BASE	.000	.000	.900	4.250
(BE4H06)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.900	4.250
(BE4H01)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.900	4.250

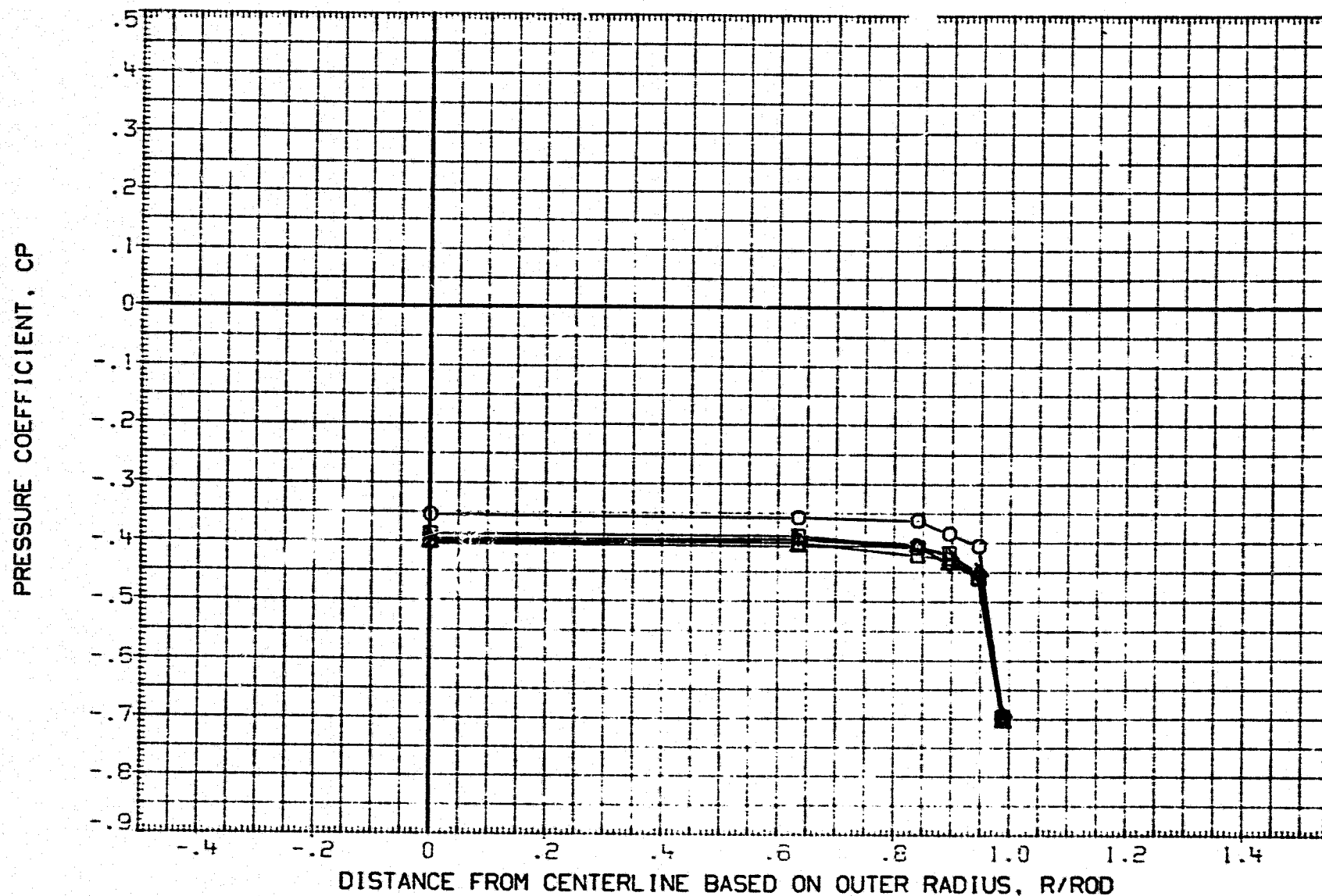


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 TA = -4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.030	.900	4.250
(BE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(BE4H66)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(BE4H81)	D	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

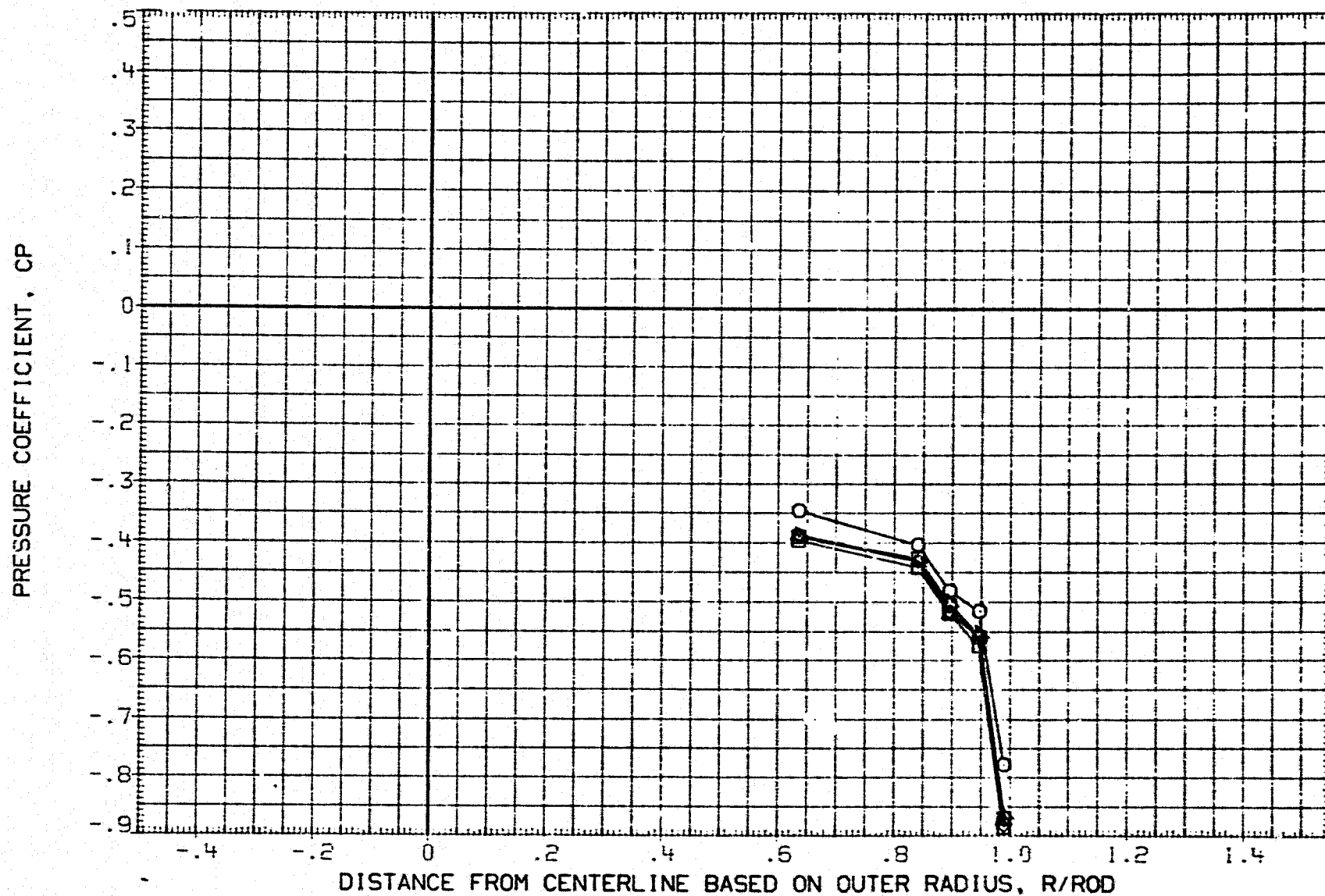


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = -4.000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OE	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N 1) ET BASE	.000	.000	.900	4.250
(BE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N 1) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	APC11-0231A80 OTS(SRB=N ORB=N 1) ET BASE	.000	.000	.900	4.250
(BE4HB6)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.900	4.250
(BE4HB1)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.900	4.250

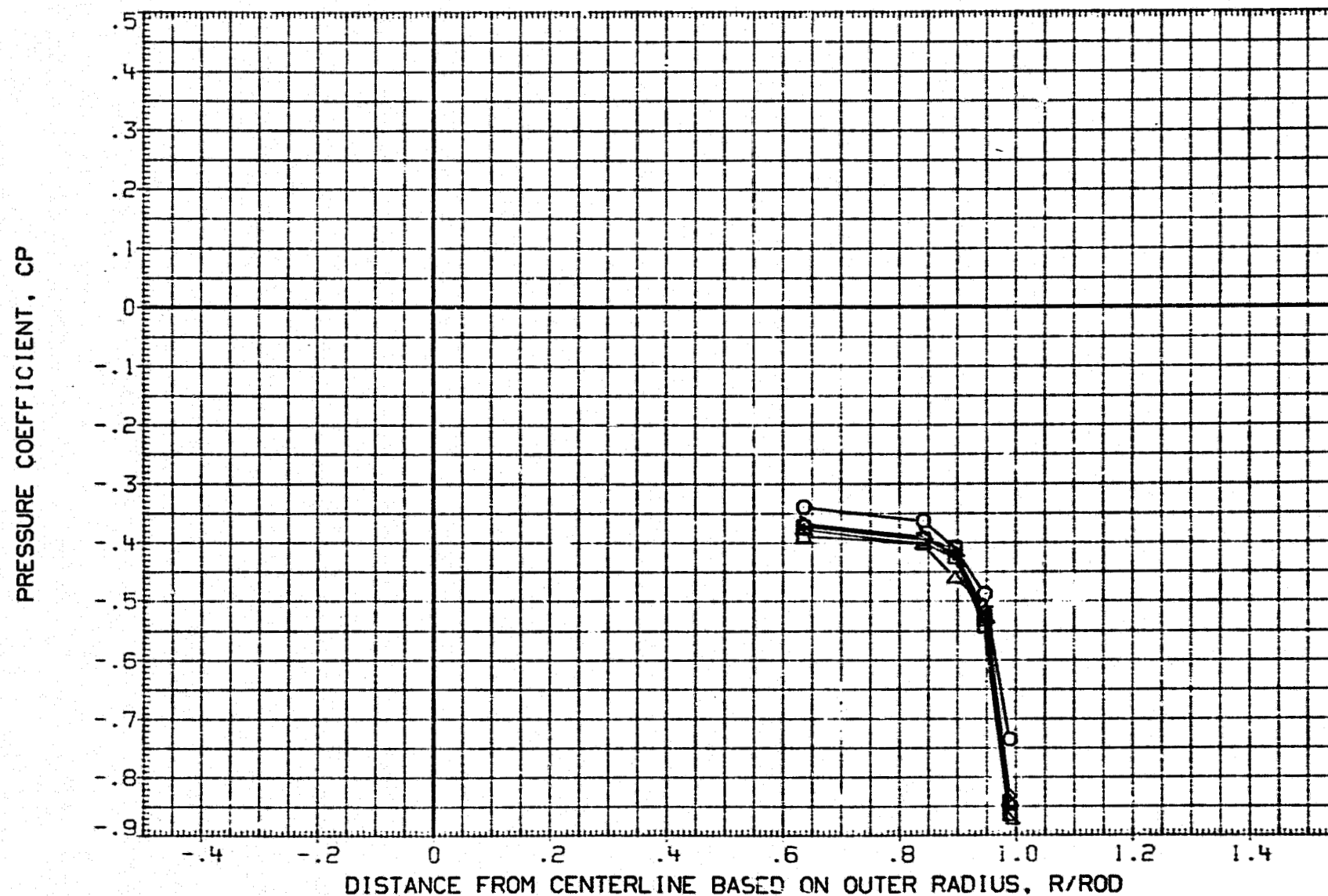


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-09	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(BE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(BE4H86)	▲	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.900	4.250
(BE4H81)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.900	4.250

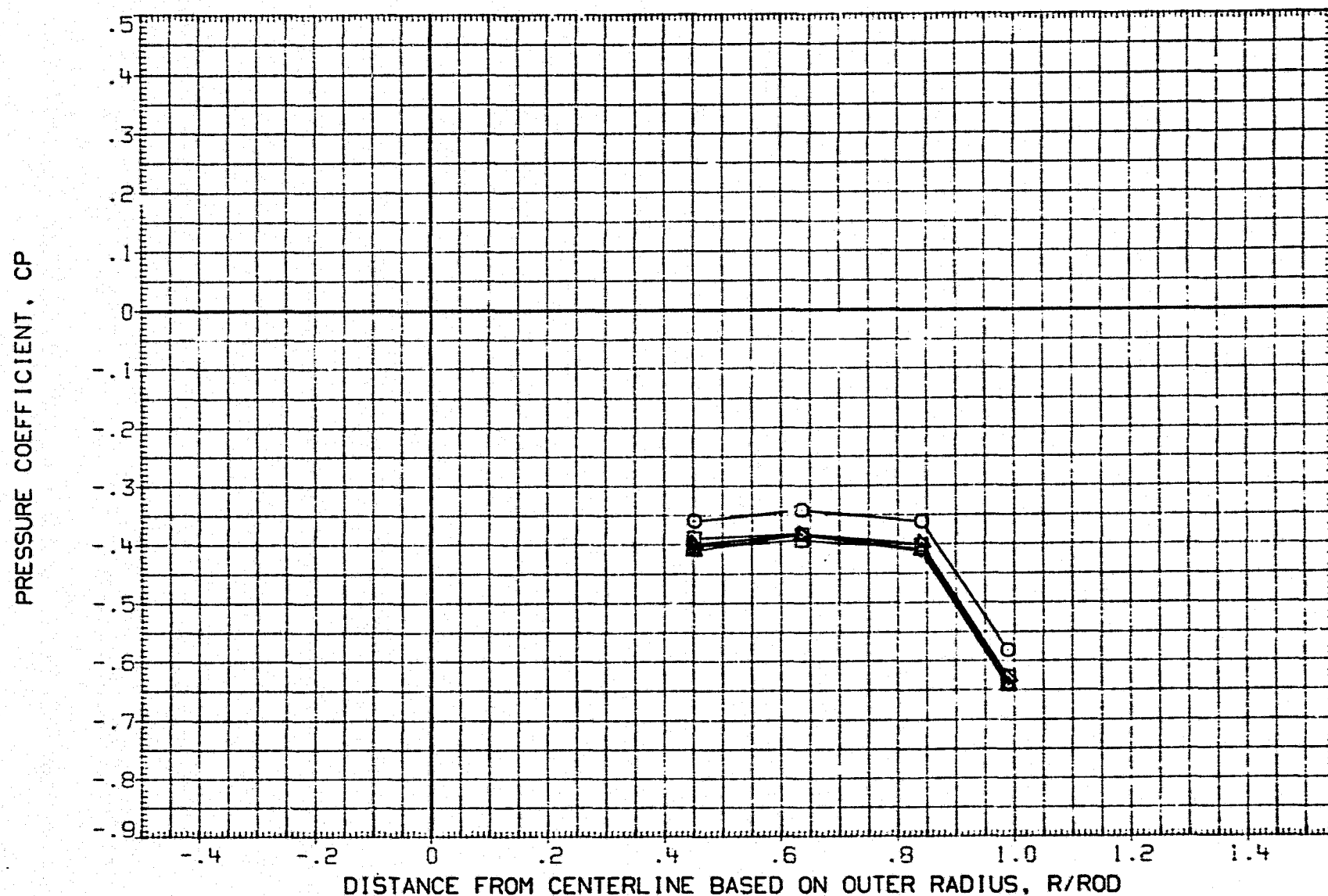


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = -4.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(BE4H16)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(BE4HB6)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	.900	4.250
(BE4HB1)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	.900	4.250

PRESSURE COEFFICIENT, CP

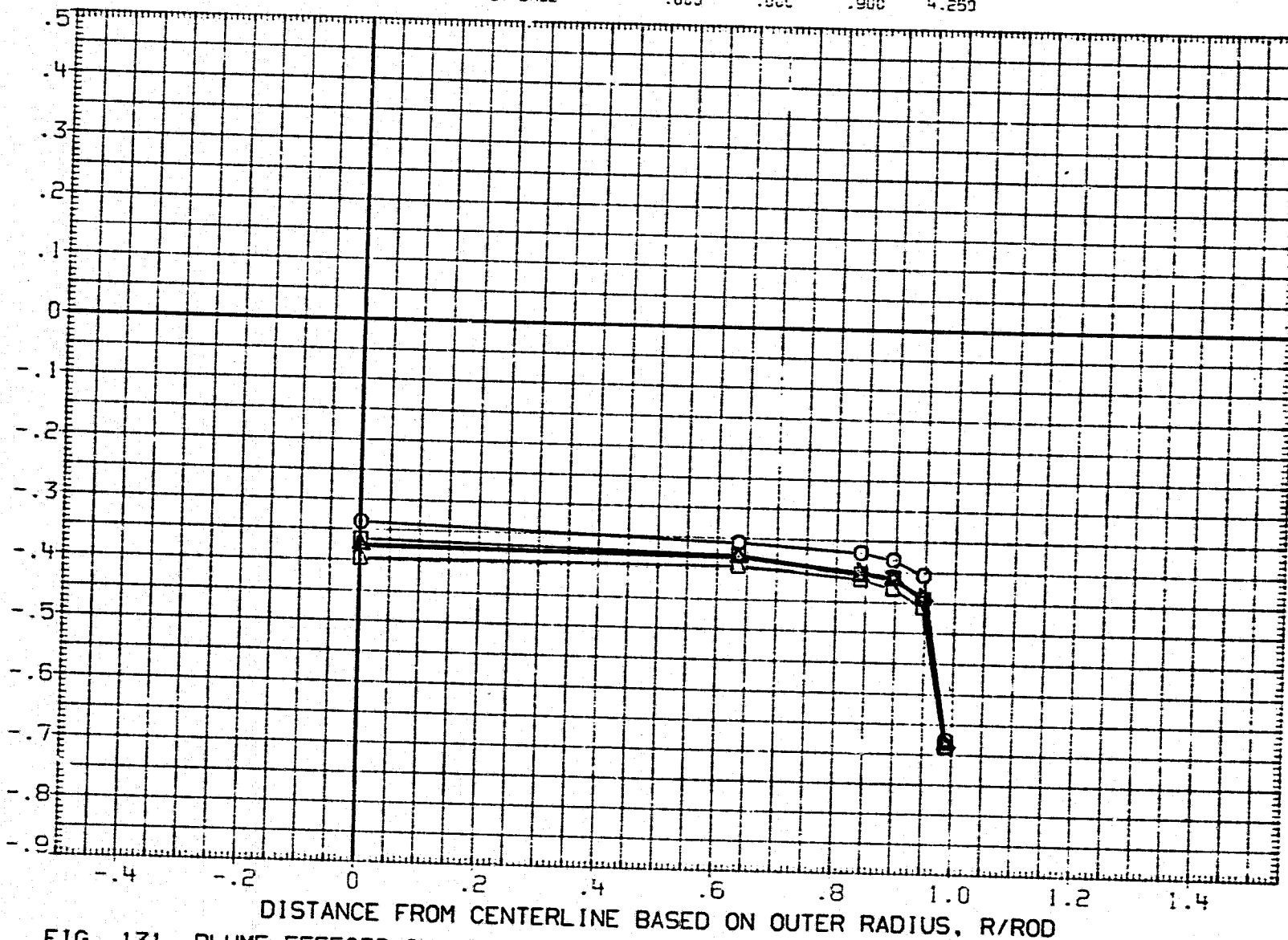


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SPB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(BE4H16)	◇	ARC11-0231A90 OTS(SPB=N ORB=N~) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(BE4HB6)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(BE4HB1)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

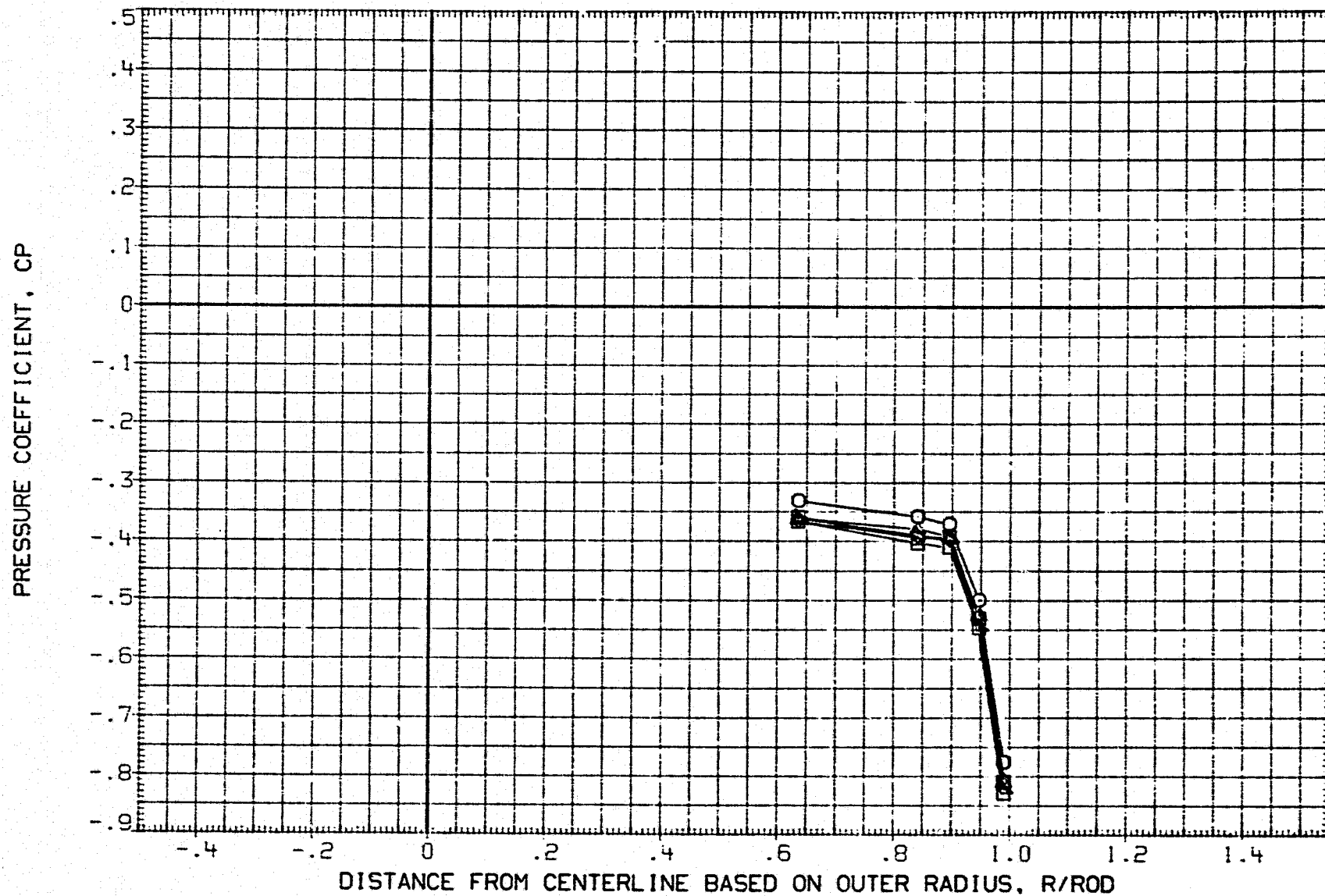


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H29)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(BE4H16)	▽	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(BE4H36)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.900	4.250
(BE4H31)	▿	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.900	4.250

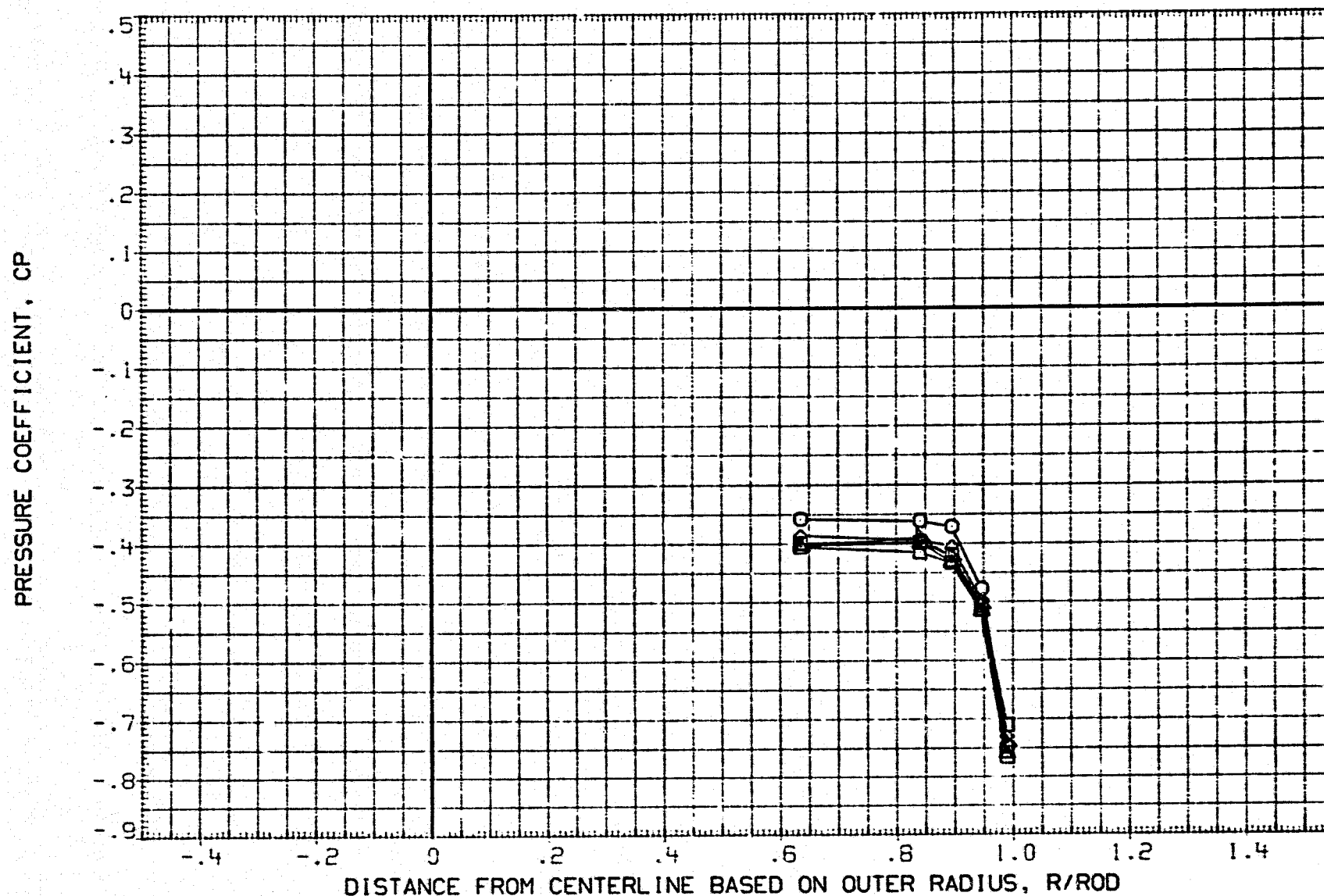


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H29)	○	ARC11-0231AB0 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	.900	4.250
(BE4H21)	□	ARC11-0231AB0 OTS(SRB=N ORB=N) ET BASE	.000	.000	.900	4.250
(BE4H16)	◇	ARC11-0231AB0 OTS(SRB=N CRB=N-) ET BASE	.000	.000	.900	4.250
(BE4H12)	△	ARC11-0231AB0 OTS(SRB=N ORB=N+) ET BASE	.000	.000	.900	4.250
(BE4HB6)	▽	ARC11-0231AB0 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	.900	4.250
(BE4HB1)	◊	ARC11-0231AB0 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	.900	4.250

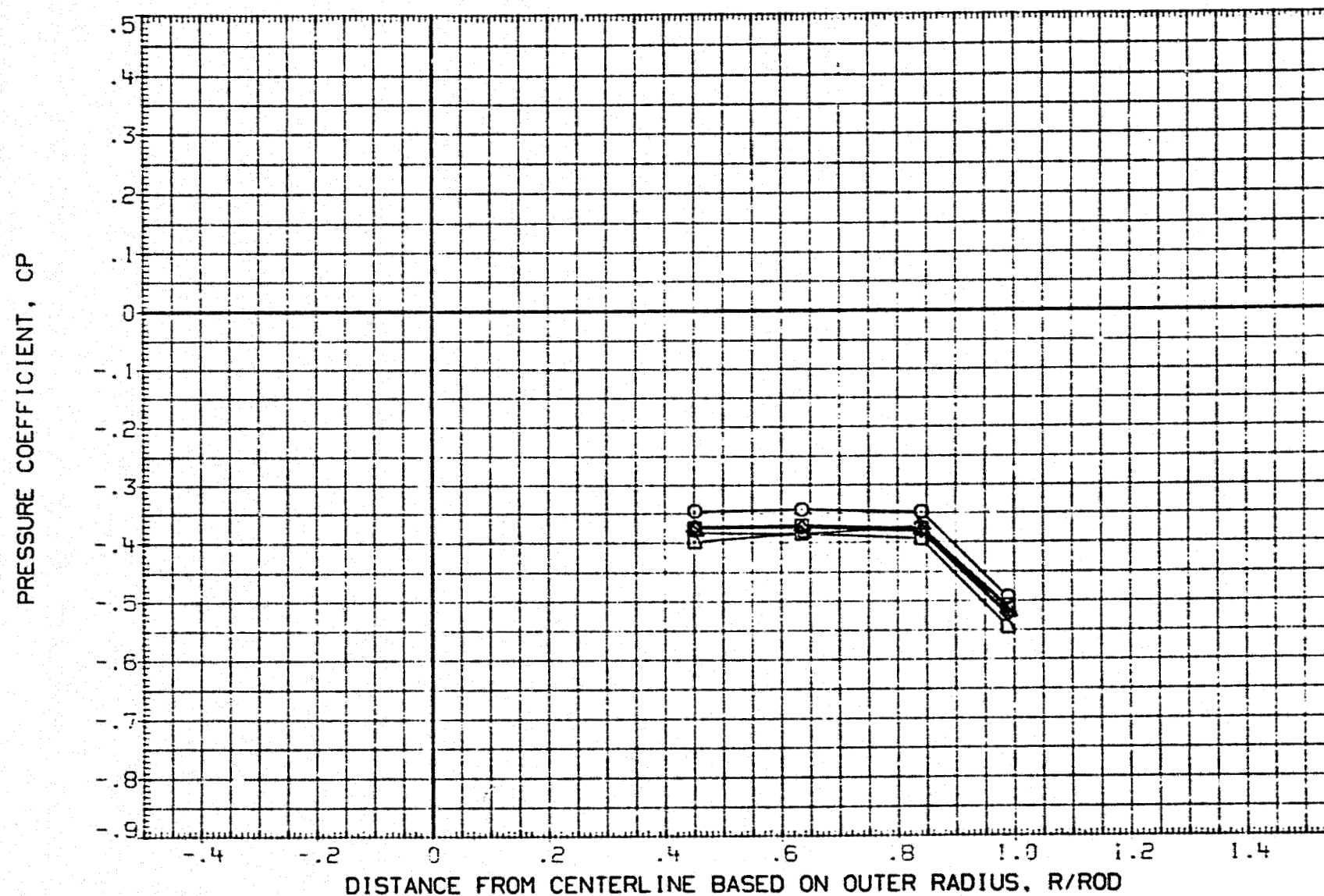


FIG. 131 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=0.9

ALPHA = .000 BETA = 4.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H39)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◊	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4HB7)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
(AE4HB2)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

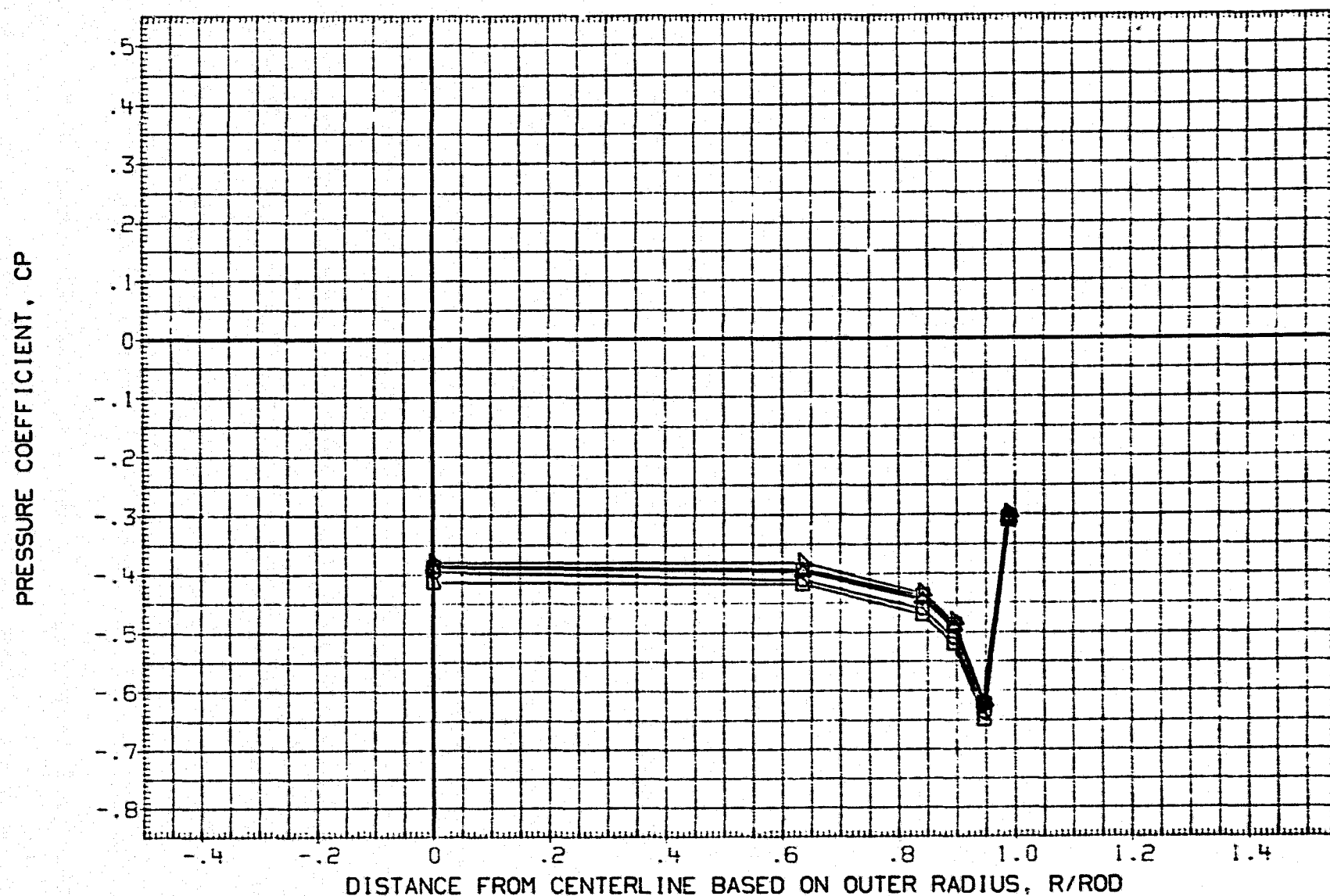


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OB	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H97)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.100	4.250
(AE4H62)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.100	4.250

PRESSURE COEFFICIENT, CP

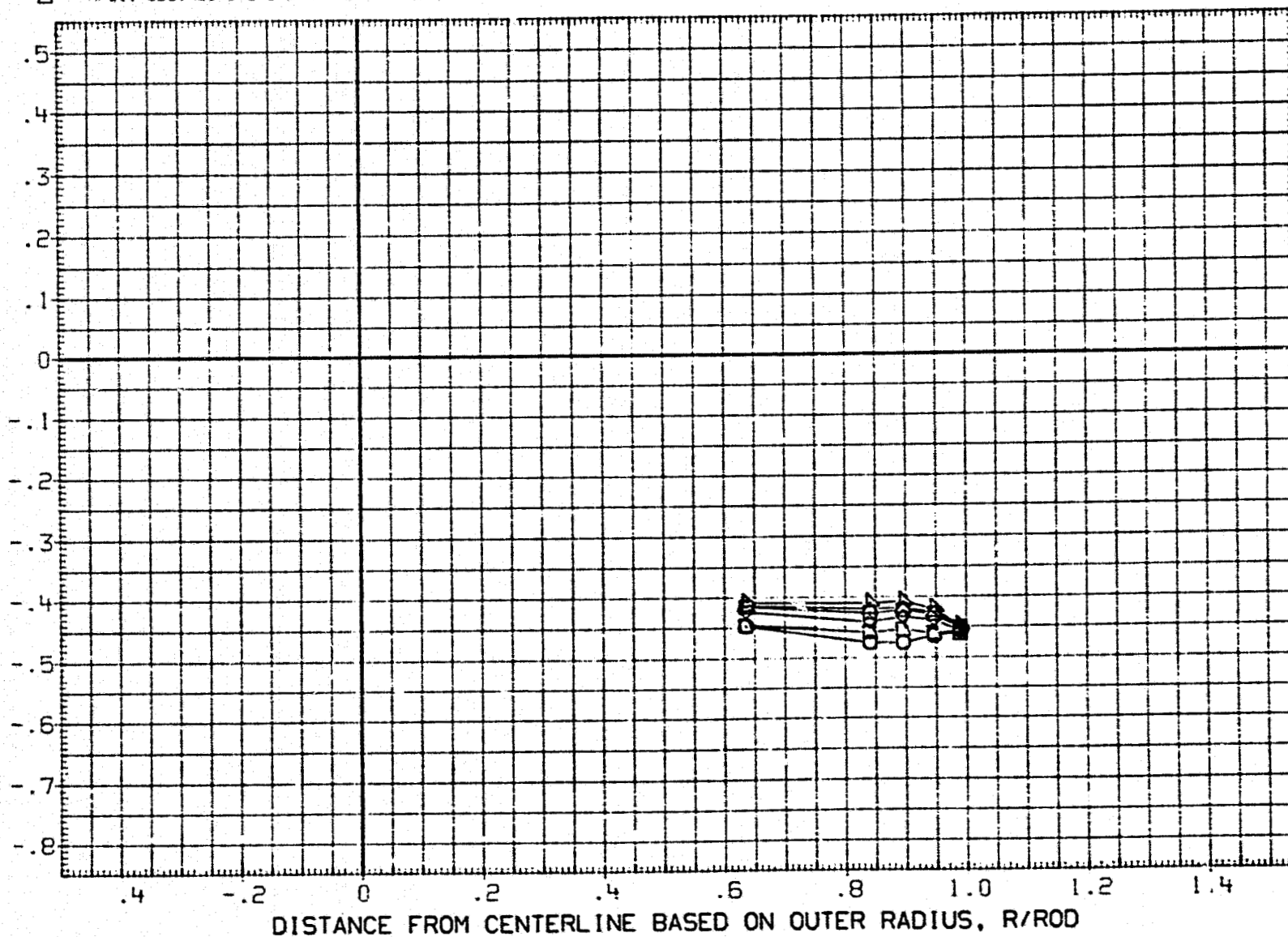


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	□	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4H37)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
(AE4H32)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

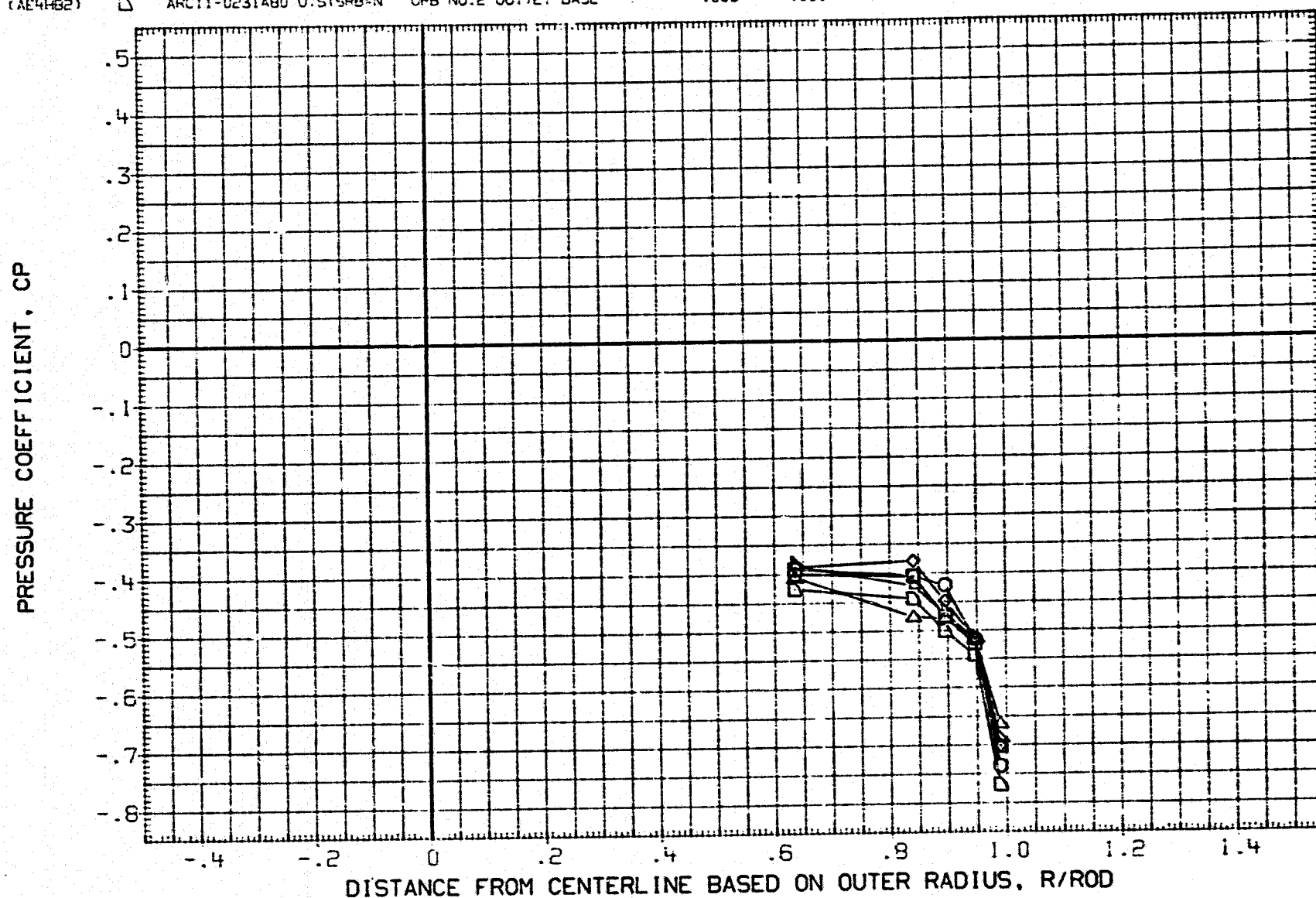


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OB	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4H97)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.100	4.250
(AE4H62)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.100	4.250

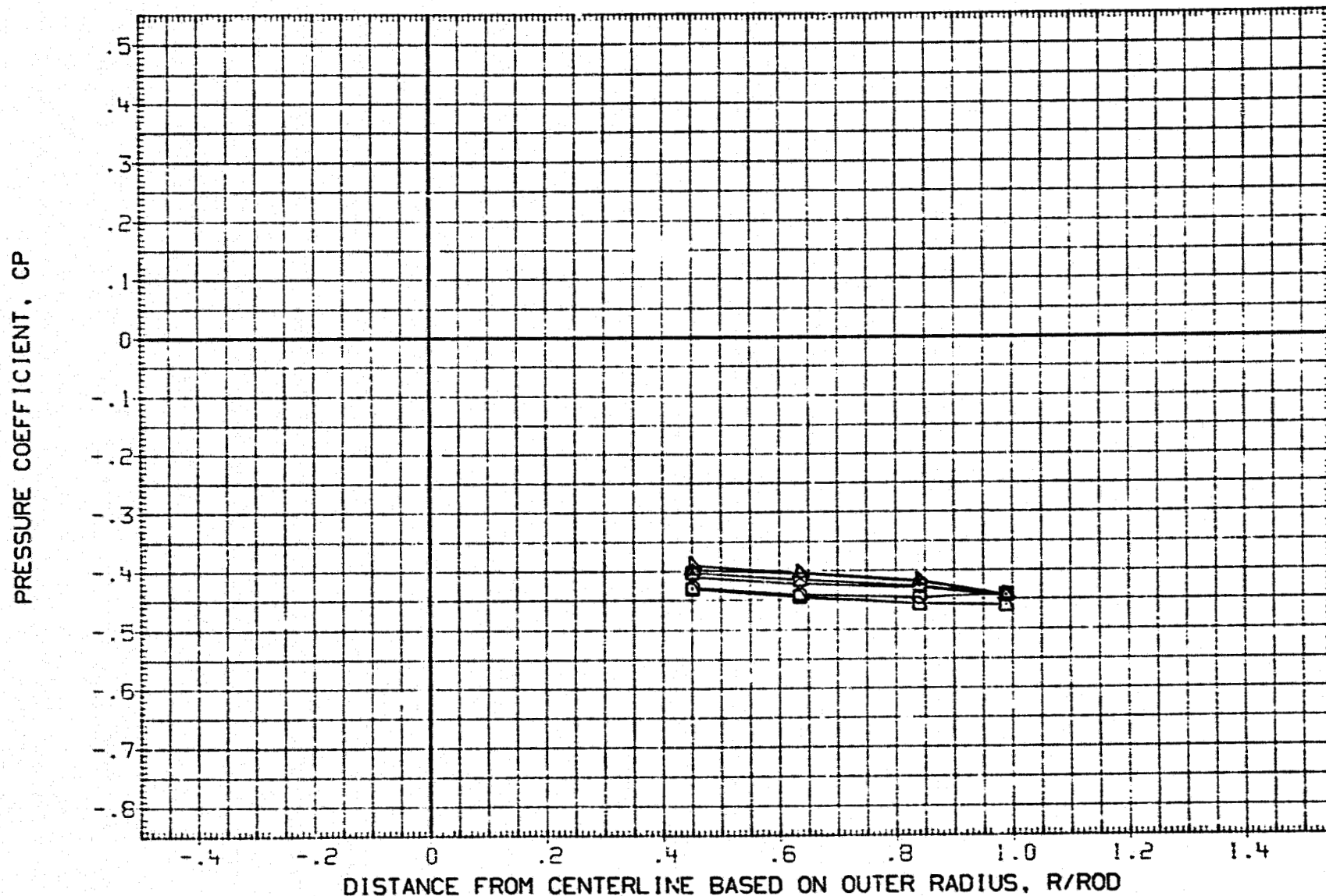


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = -4.000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N CPB=N-) ET BASE	.000	.000	1.100	4.250
(AE4HB7)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	1.100	4.250
(AE4HB2)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	1.100	4.250

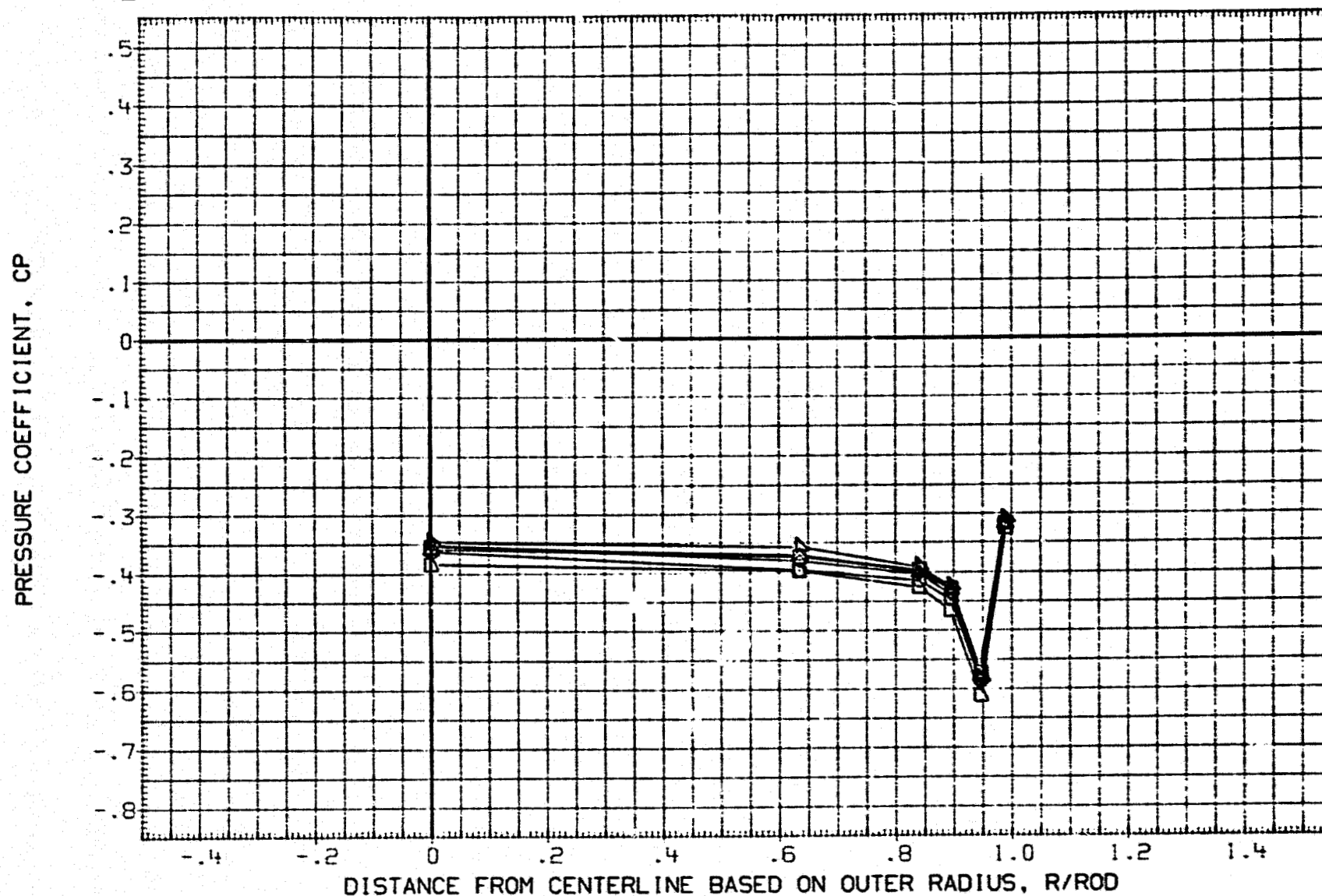


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
AE4H30	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
AE4H22	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
AE4H17	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
AE4H13	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
AE4H87	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTJET BASE	.000	.000	1.100	4.250
AE4H82	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTJET BASE	.000	.000	1.100	4.250

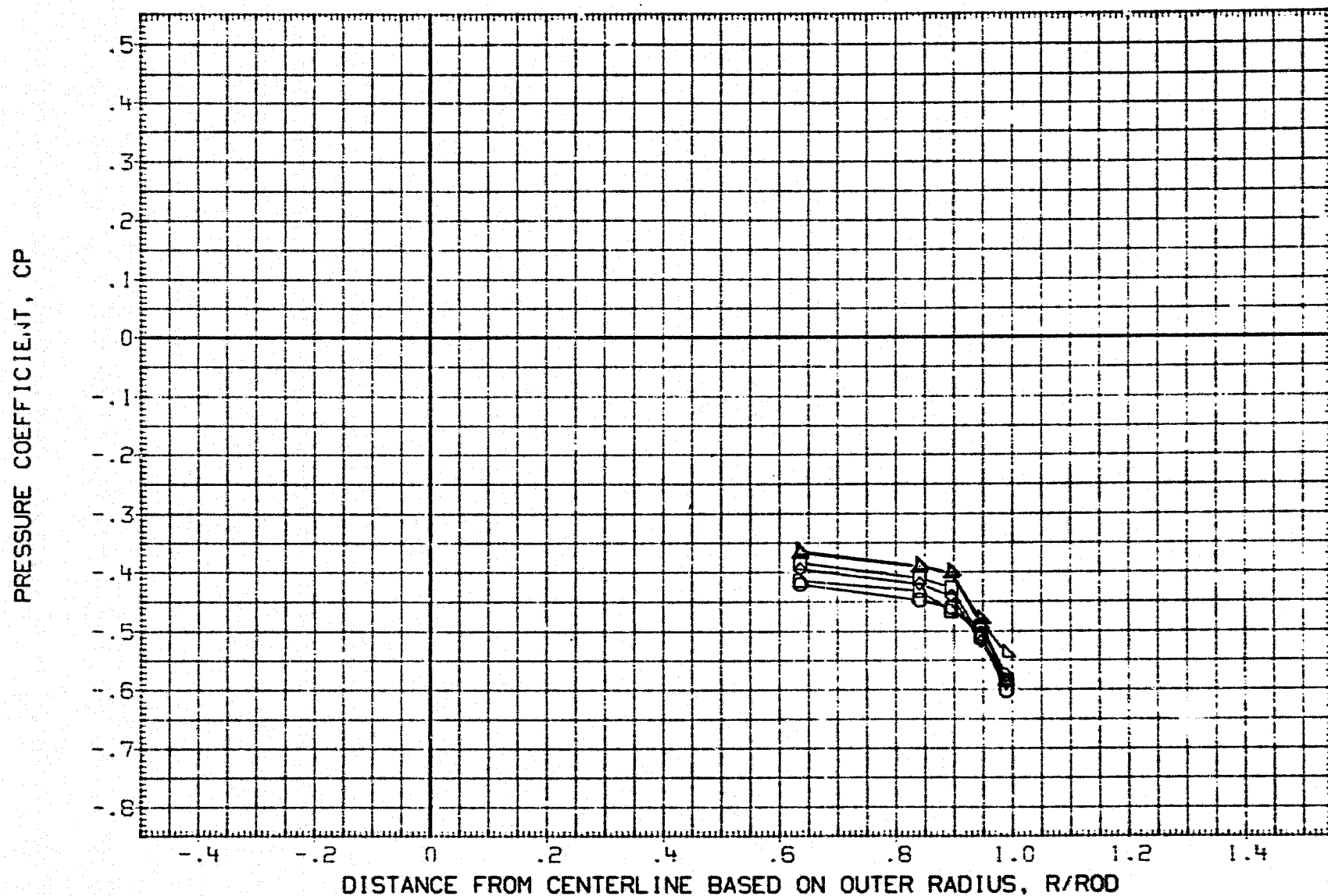


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SPB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	□	ARC11-0231A80 OTS(SPB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SPB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SPB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4H97)	▽	ARC11-0231A80 OTS(SPB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
(AE4H92)	◻	ARC11-0231A80 OTS(SPB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

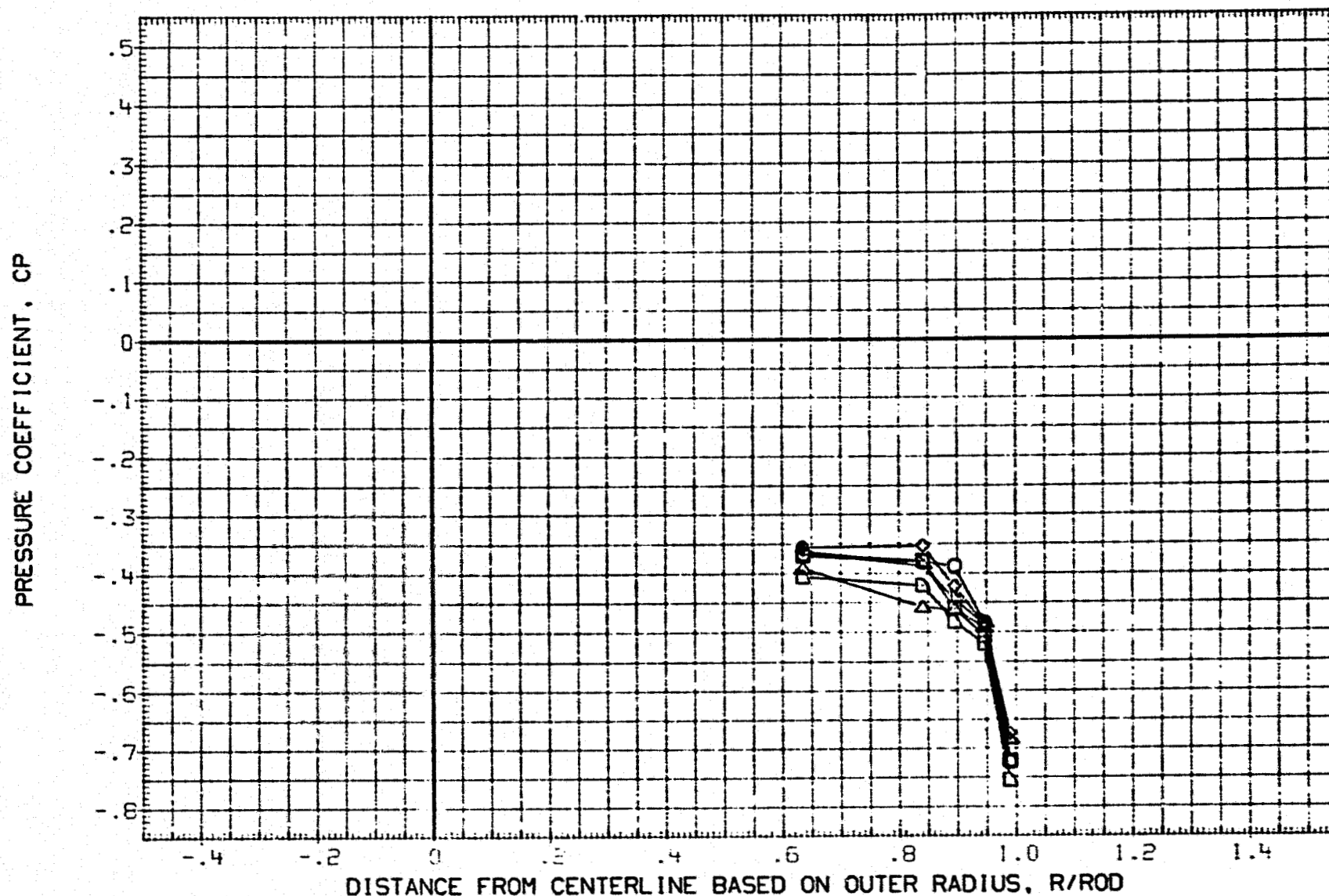


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-7B	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SPB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	◇	ARC11-0231A80 OTS(SPB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SPB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SPB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H87)	△	ARC11-0231A80 OTS(SPB=N ORB NO.1 OUT) ET BASE	.000	.000	1.100	4.250
(AE4H92)	△	ARC11-0231A80 OTS(SPB=N ORB NO.2 OUT) ET BASE	.000	.000	1.100	4.250

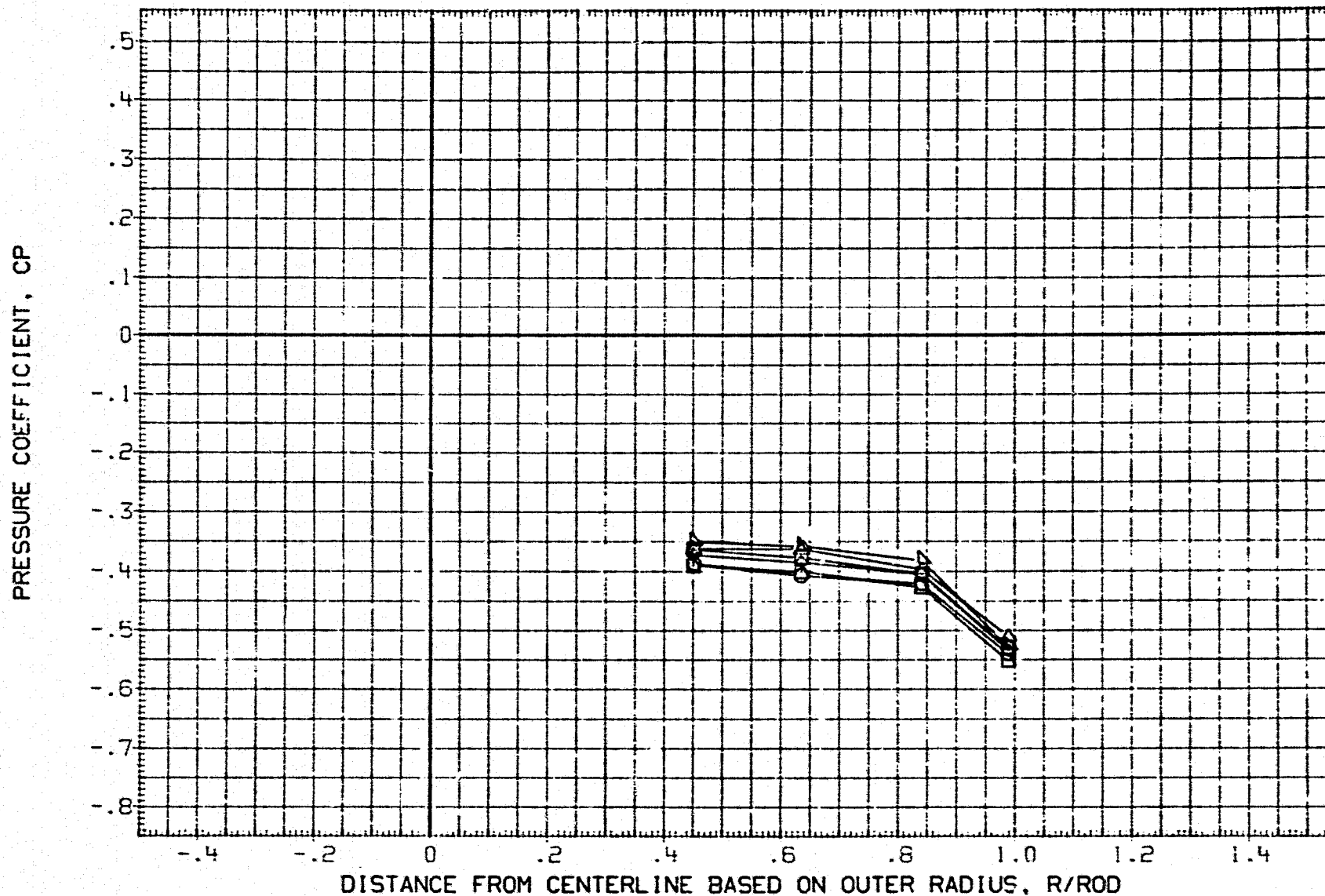


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4H87)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	1.100	4.250
(AE4H82)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	1.100	4.250

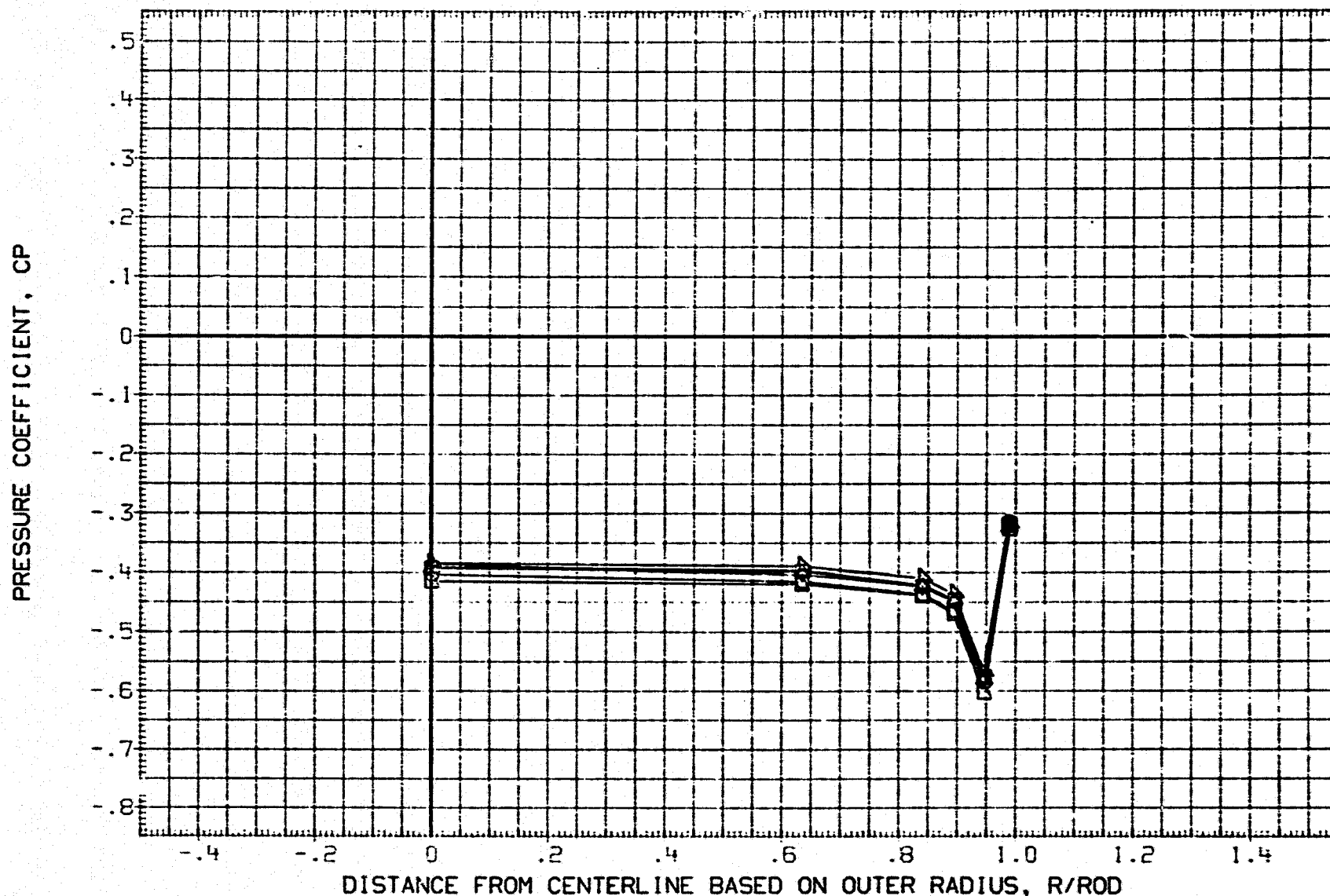


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
1AE4H30)	□	ARC11-0231A80 OTS(SRB=OFF OPB=OFF) ET BASE	.000	.000	1.100	4.250
1AE4H22)	□	ARC11-0231A80 OTS(SRB=N OPB=N) ET BASE	.000	.000	1.100	4.250
1AE4H17)	◇	ARC11-0231A80 OTS(SRB=N OPB=N-) ET BASE	.000	.000	1.100	4.250
1AE4H13)	△	ARC11-0231A80 OTS(SRB=N OPB=N+) ET BASE	.000	.000	1.100	4.250
1AE4HB7)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
1AE4HB2)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

PRESSURE COEFFICIENT, CP

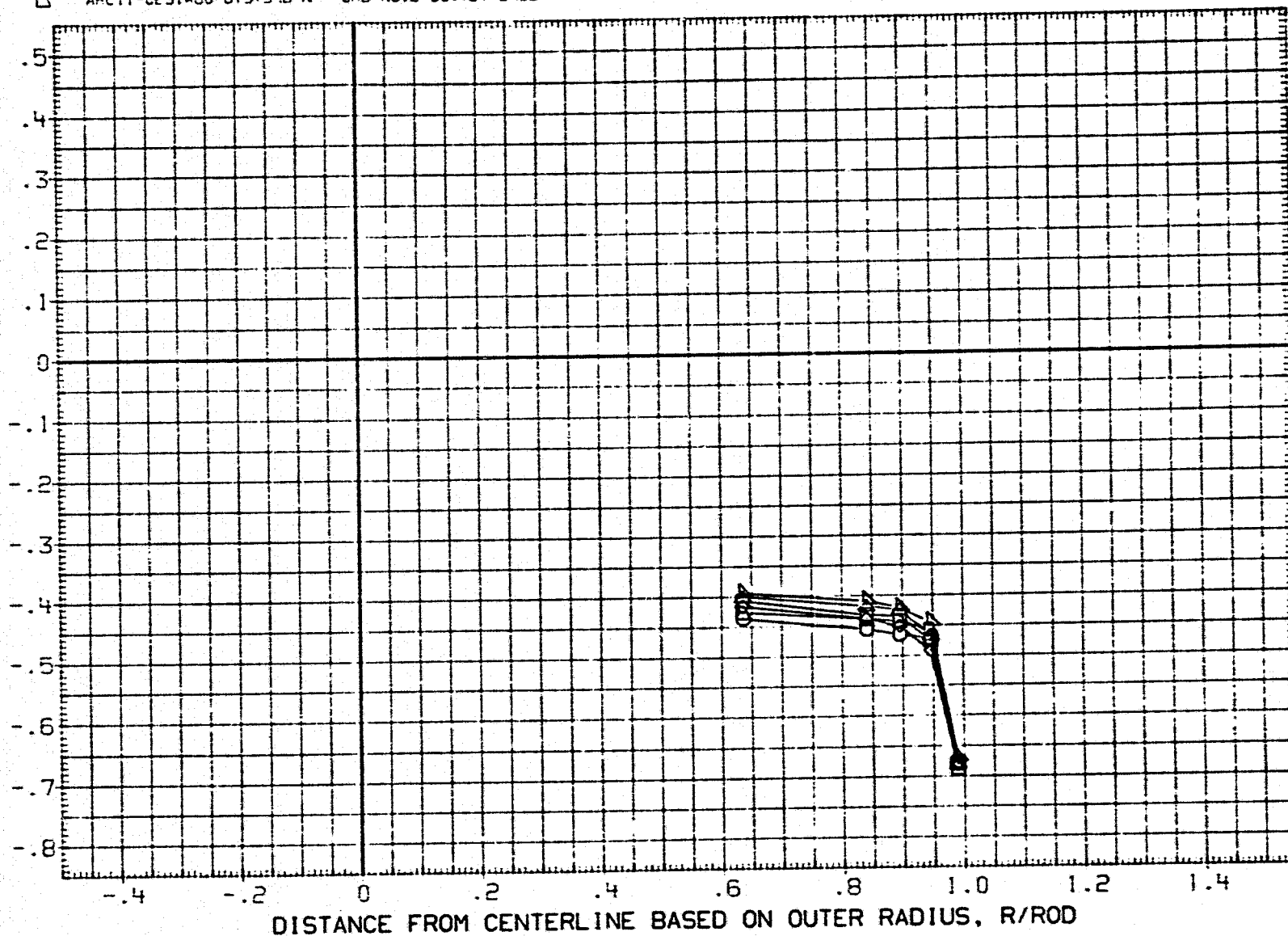


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	□	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N*) ET BASE	.000	.000	1.100	4.250
(AE4H97)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUTLET BASE	.000	.000	1.100	4.250
(AE4H82)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUTLET BASE	.000	.000	1.100	4.250

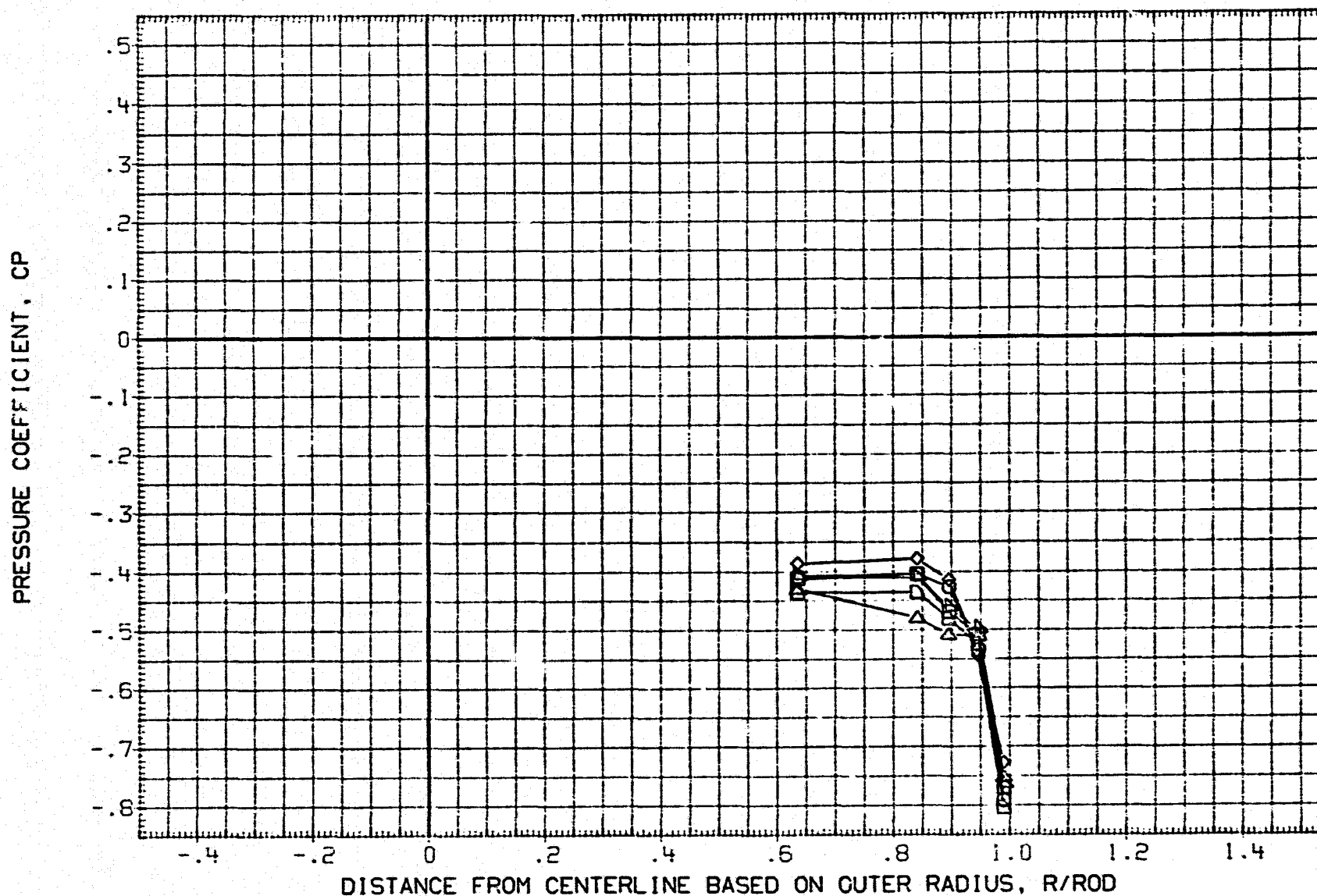


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	R _h /L
(AE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(AE4H22)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(AE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(AE4HB7)	△	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
(AE4HB2)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

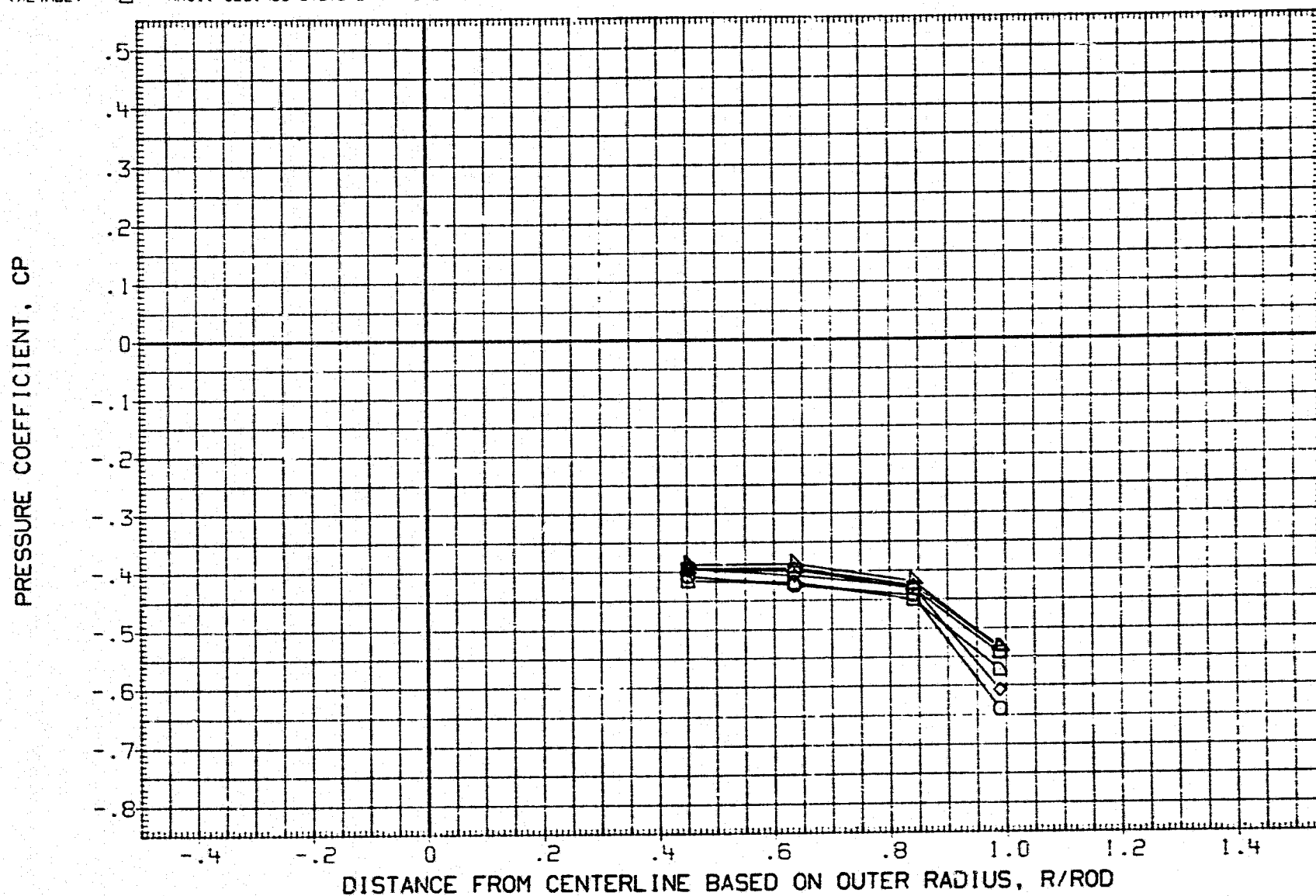


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = 4.000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(BE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(BE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(BE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(BE4H37)	▲	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
(BE4H32)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

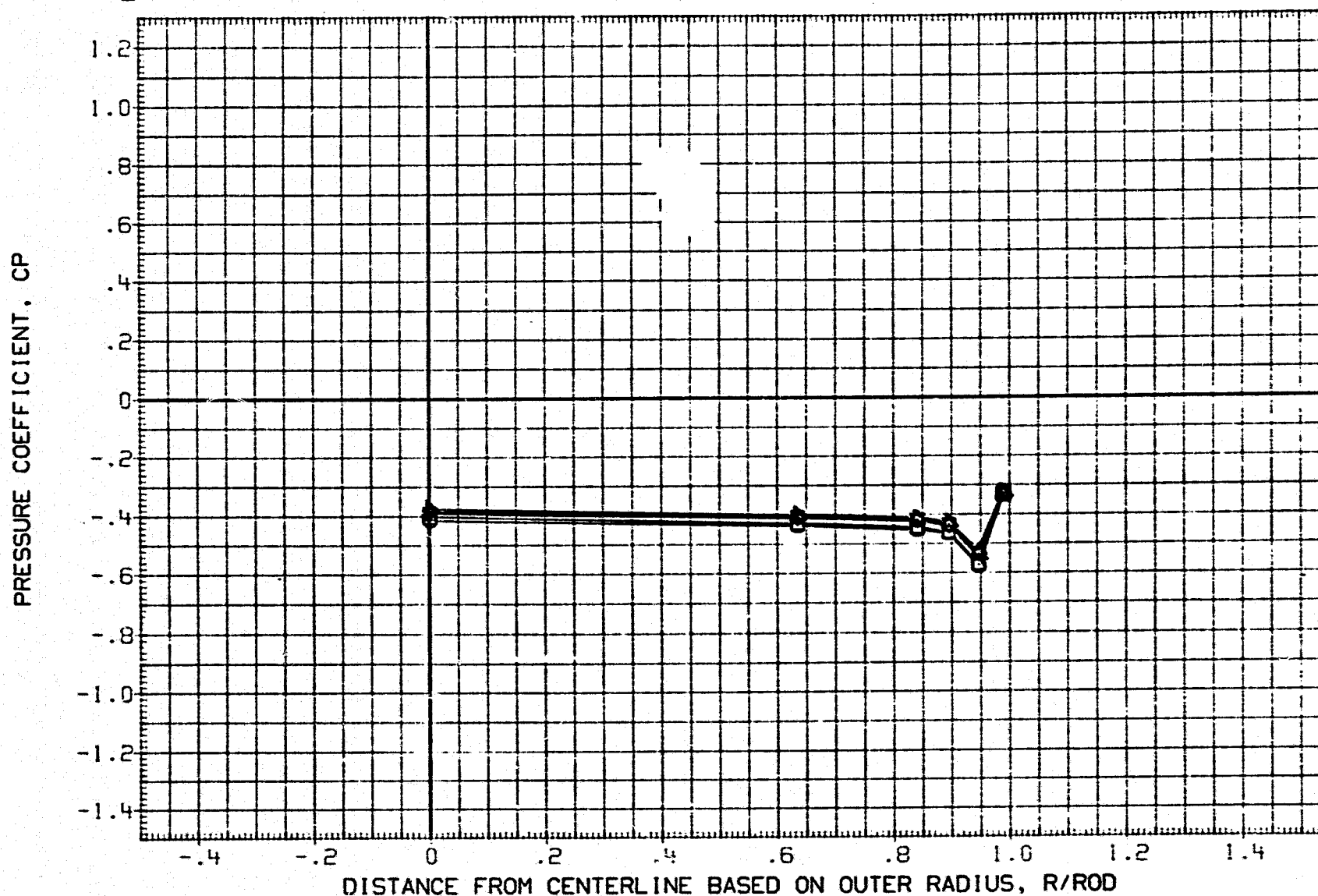


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L	
(BE4H30)	○	ARC11-0231A80 OTS1SPB=OFF ORB=OFF	ET BASE	.000	.000	1.100	4.250
(BE4H22)	□	ARC11-0231A80 OTS1SPB=N ORB=N	ET BASE	.000	.000	1.100	4.250
(BE4H17)	◇	ARC11-0231A80 OTS1SPB=N ORB=N	ET BASE	.000	.000	1.100	4.250
(BE4H13)	△	ARC11-0231A80 OTS1SPB=N ORB=N	ET BASE	.000	.000	1.100	4.250
(BE4H37)	▽	ARC11-0231A80 OTS1SPB=N ORB NO.1 OUTLET BASE	ET BASE	.000	.000	1.100	4.250
(BE4H21)	◇	ARC11-0231A80 OTS1SPB=N ORB NO.2 OUTLET BASE	ET BASE	.000	.000	1.100	4.250

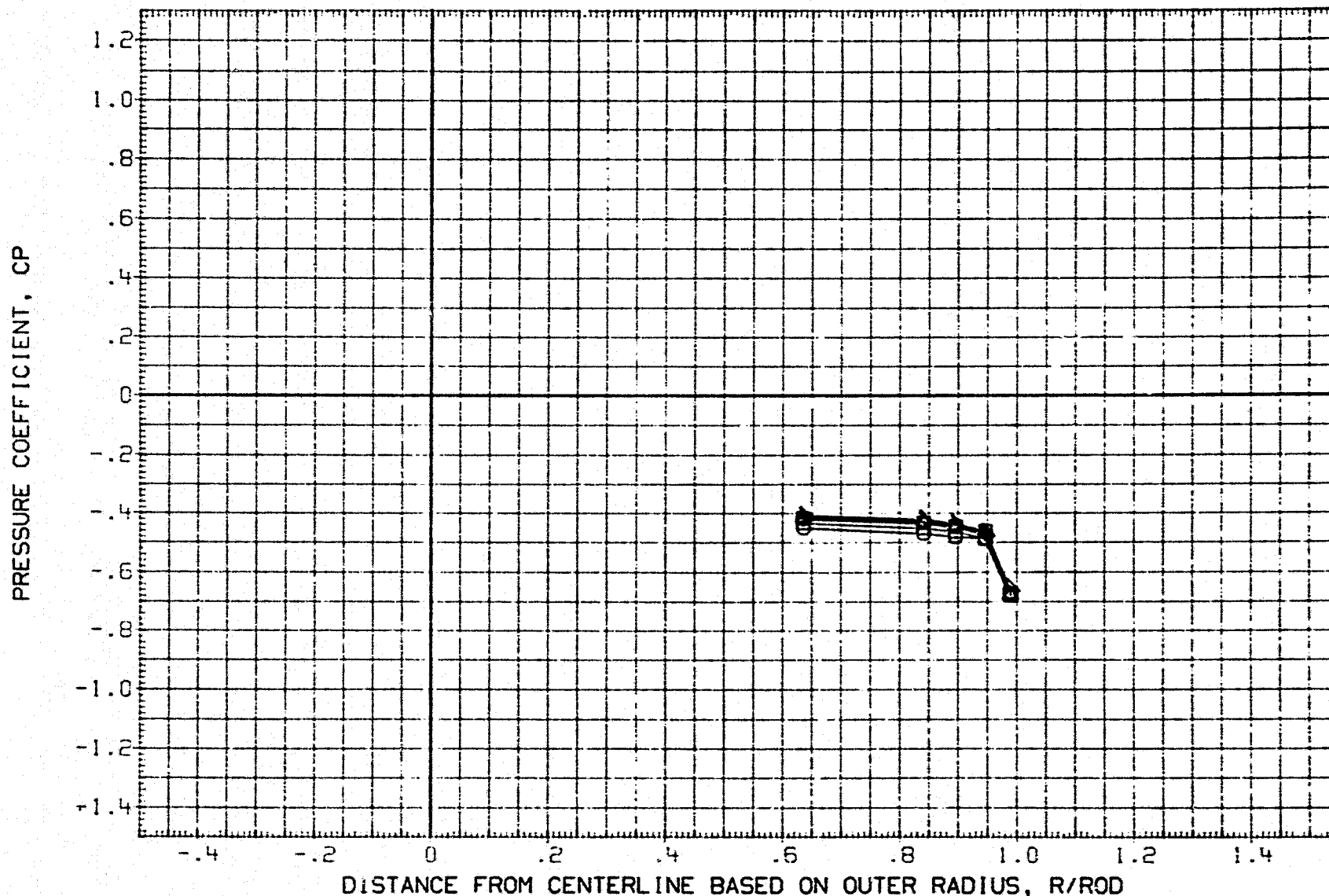


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L
BE4H39)	○	ARC11-0231AB0 OTS(SRB-OFF) ORB-OFF) ET BASE	.000	.100	1.100	4.250
BE4H22)	□	ARC11-0231AB0 OTS(SRB=N) ORB=N) ET BASE	.000	.100	1.100	4.250
BE4H17)	◇	ARC11-0231AB0 OTS(SRB=N) ORB=N-) ET BASE	.000	.100	1.100	4.250
BE4H13)	△	ARC11-0231AB0 OTS(SRB=N) ORB=N+) ET BASE	.000	.100	1.100	4.250
BE4H07)	▽	ARC11-0231AB0 OTS(SRB=N) ORB NO.1 OUT:ET BASE	.000	.100	1.100	4.250
BE4H02)	◇	ARC11-0231AB0 OTS(SRB=N) ORB NO.2 OUT:ET BASE	.000	.100	1.100	4.250

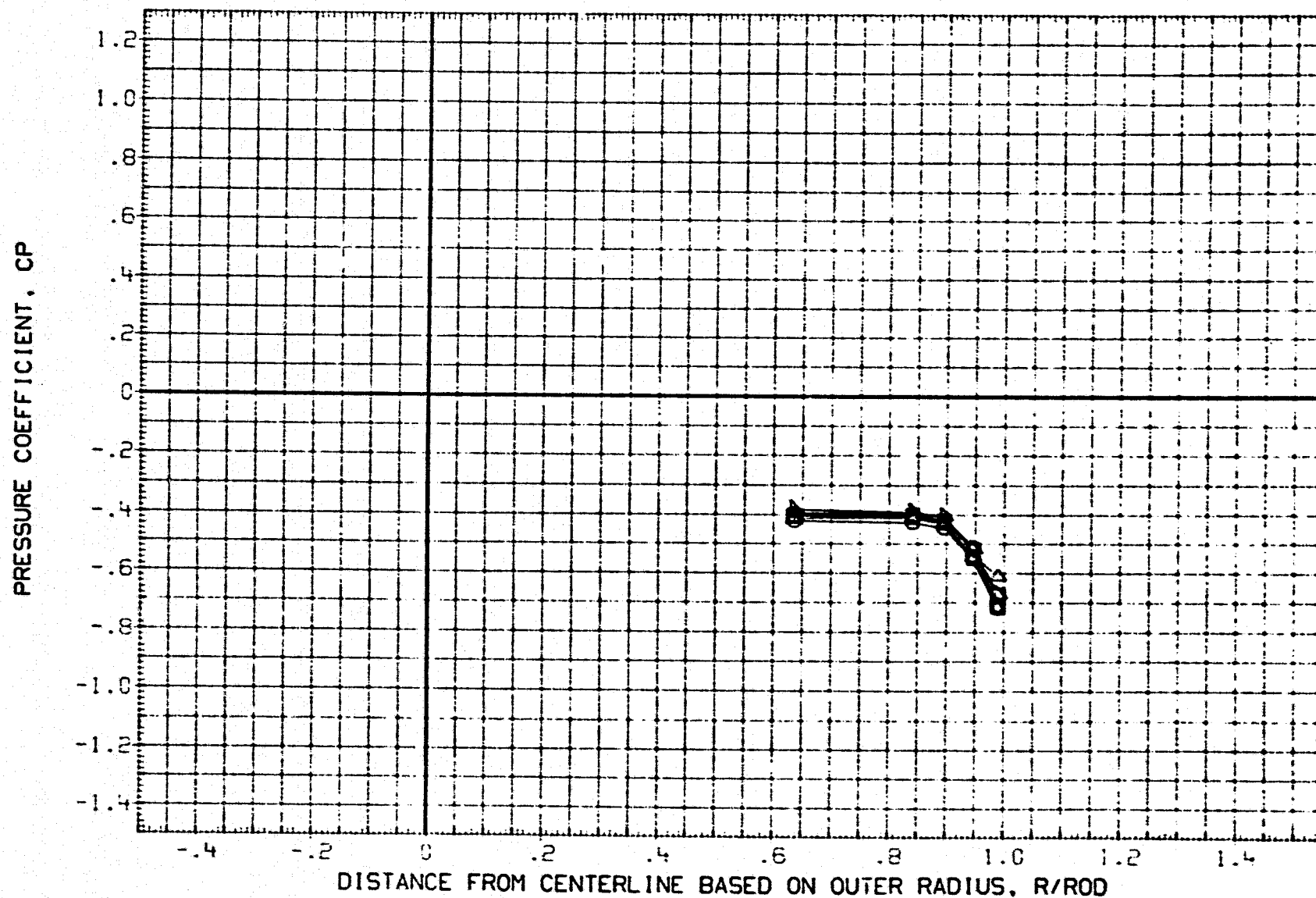


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = 120.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	PN-L
1000-1001	000-140	APC11-0231490 OTS-CRB OFF CRB-OFF 1 ET BASE	.000	.000	1.100	4.250
1000-1002	000-140	APC11-0231490 OTS-CRB-N CRB-N 1 ET BASE	.000	.000	1.100	4.250
1000-1003	000-140	APC11-0231490 OTS-CRB-N CRB-N 1 ET BASE	.000	.000	1.100	4.250
1000-1004	000-140	APC11-0231490 OTS-CRB-N CRB-N 1 ET BASE	.000	.000	1.100	4.250
1000-1005	000-140	APC11-0231490 OTS-CRB-N CRB-N 1 ET BASE	.000	.000	1.100	4.250
1000-1006	000-140	APC11-0231490 OTS-CRB-N CRB NO.1 OUTLET BASE	.000	.000	1.100	4.250
1000-1007	000-140	APC11-0231490 OTS-CRB-N CRB NO.2 OUTLET BASE	.000	.000	1.100	4.250

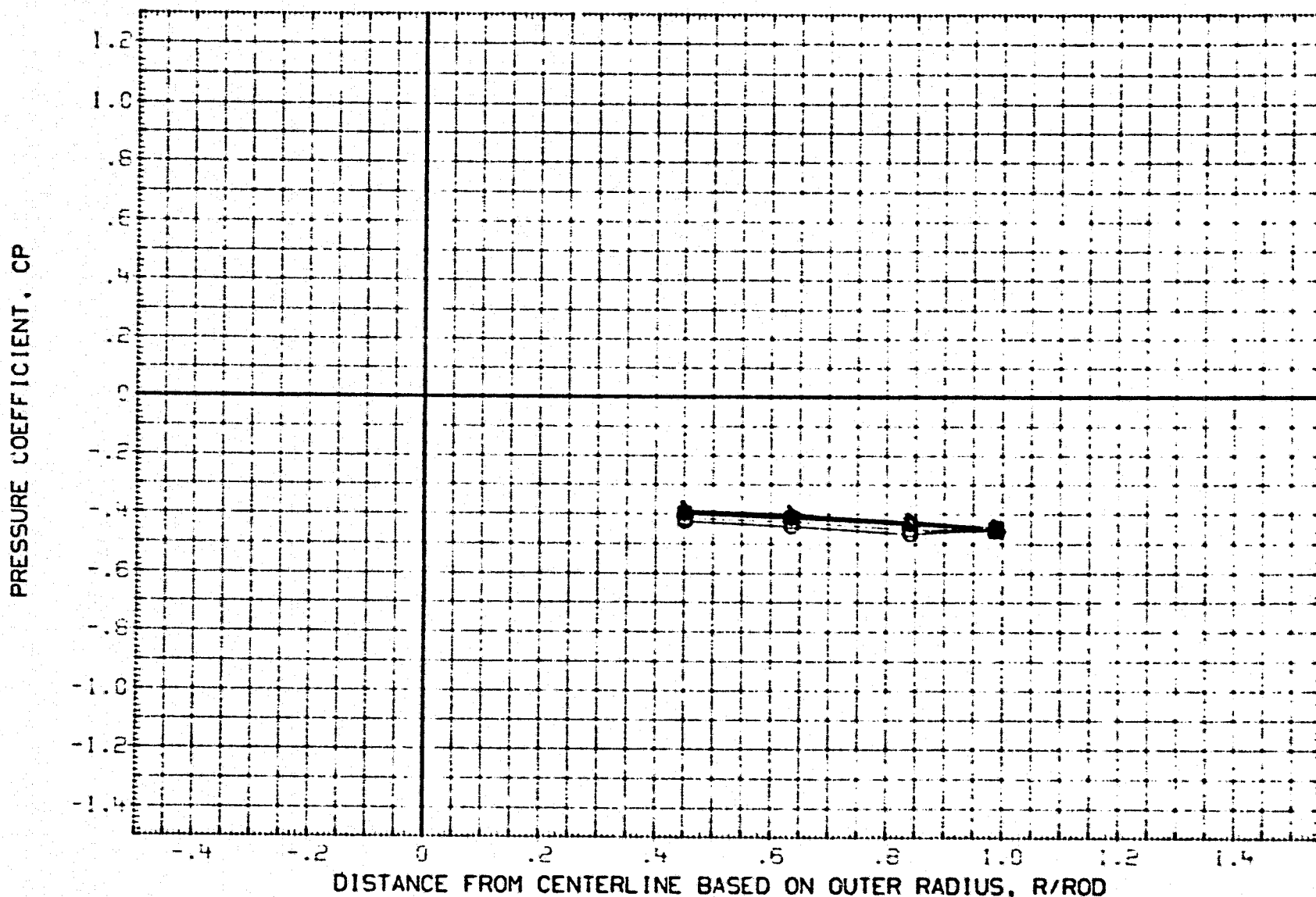


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = -4.000 PHI = 270.000

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DATA SET	SUBOL	CONFIGURATION DESCRIPTION	ELV-DB	ELV-DB	MACH	REF
104-4-20	020-4-11	ARC11-0231ARD 075 OFF-OFF OFF-OFF1 ET BASE	.0000	.0000	1.100	4.250
104-4-21		ARC11-0231ARD 075 OFF-OFF OFF-N 1 ET BASE	.0000	.0000	1.100	4.250
104-4-22		ARC11-0231ARD 075 OFF-OFF OFF-N 1 ET BASE	.0000	.0000	1.100	4.250
104-4-23		ARC11-0231ARD 075 OFF-OFF OFF-N 1 ET BASE	.0000	.0000	1.100	4.250
104-4-24		ARC11-0231ARD 075 OFF-OFF OFF-N 1 OUT-ET BASE	.0000	.0000	1.100	4.250
104-4-25		ARC11-0231ARD 075 OFF-OFF OFF-N 1 OUT-ET BASE	.0000	.0000	1.100	4.250

PRESSURE COEFFICIENT, CP

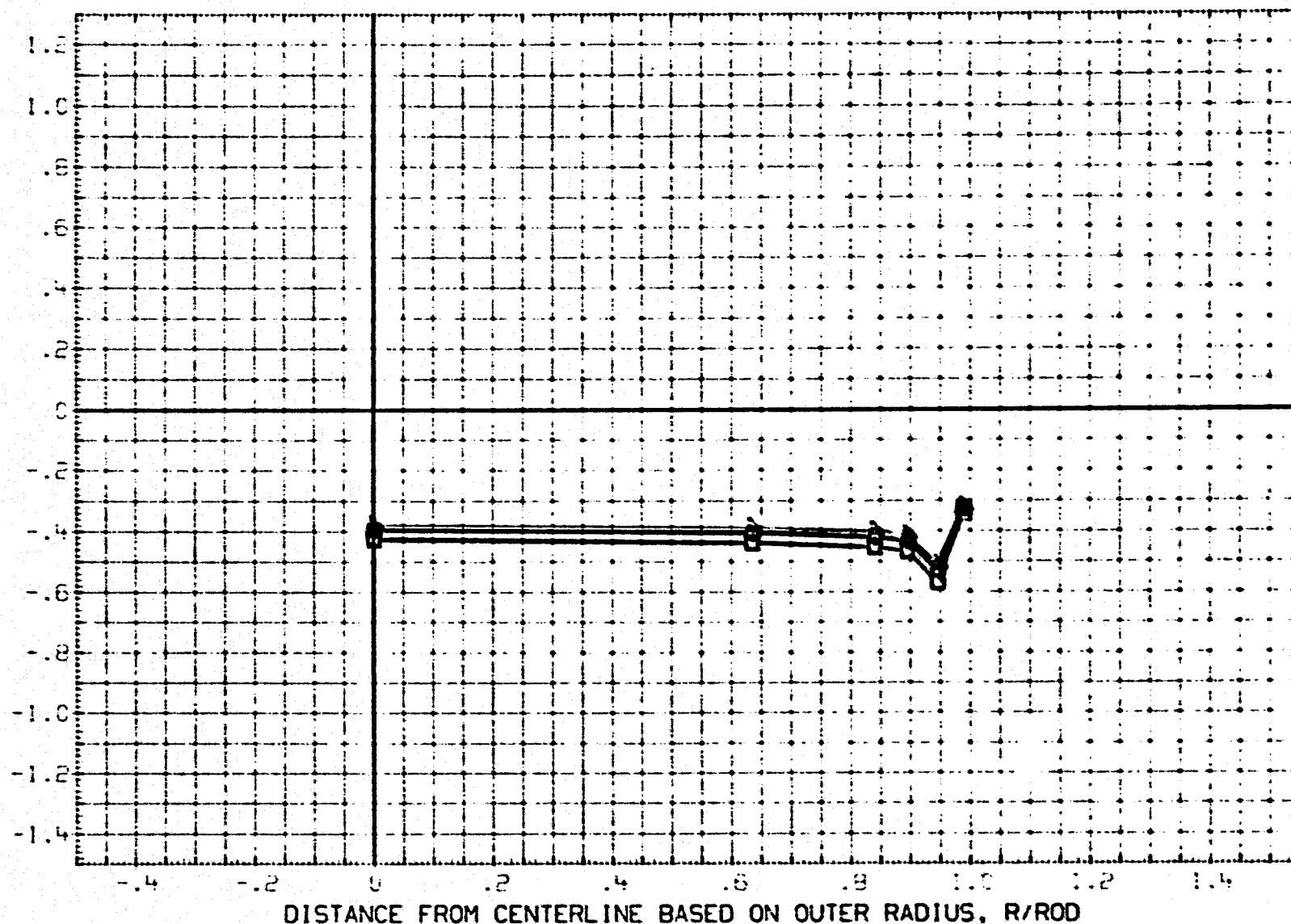


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-09	MACH	PHI
(BE4439)	□	ARC11-0231A80 0°S15RB-OFF CRB-OFF1 ET BASE	.000	.000	1.100	90.000
(BE4438)	□	ARC11-0231A80 0°S15RB-N CRB-N-1 ET BASE	.000	.000	1.100	90.000
(BE4417)	□	ARC11-0231A80 0°S15RB-N CRB-N-1 ET BASE	.000	.000	1.100	90.000
(BE4413)	□	ARC11-0231A80 0°S15RB-N CRB-N-1 ET BASE	.000	.000	1.100	90.000
(BE4407)	□	ARC11-0231A80 0°S15RB-N CRB NO.1 OUTLET BASE	.000	.000	1.100	90.000
(BE4402)	□	ARC11-0231A80 0°S15RB-N CRB NO.2 OUTLET BASE	.000	.000	1.100	90.000

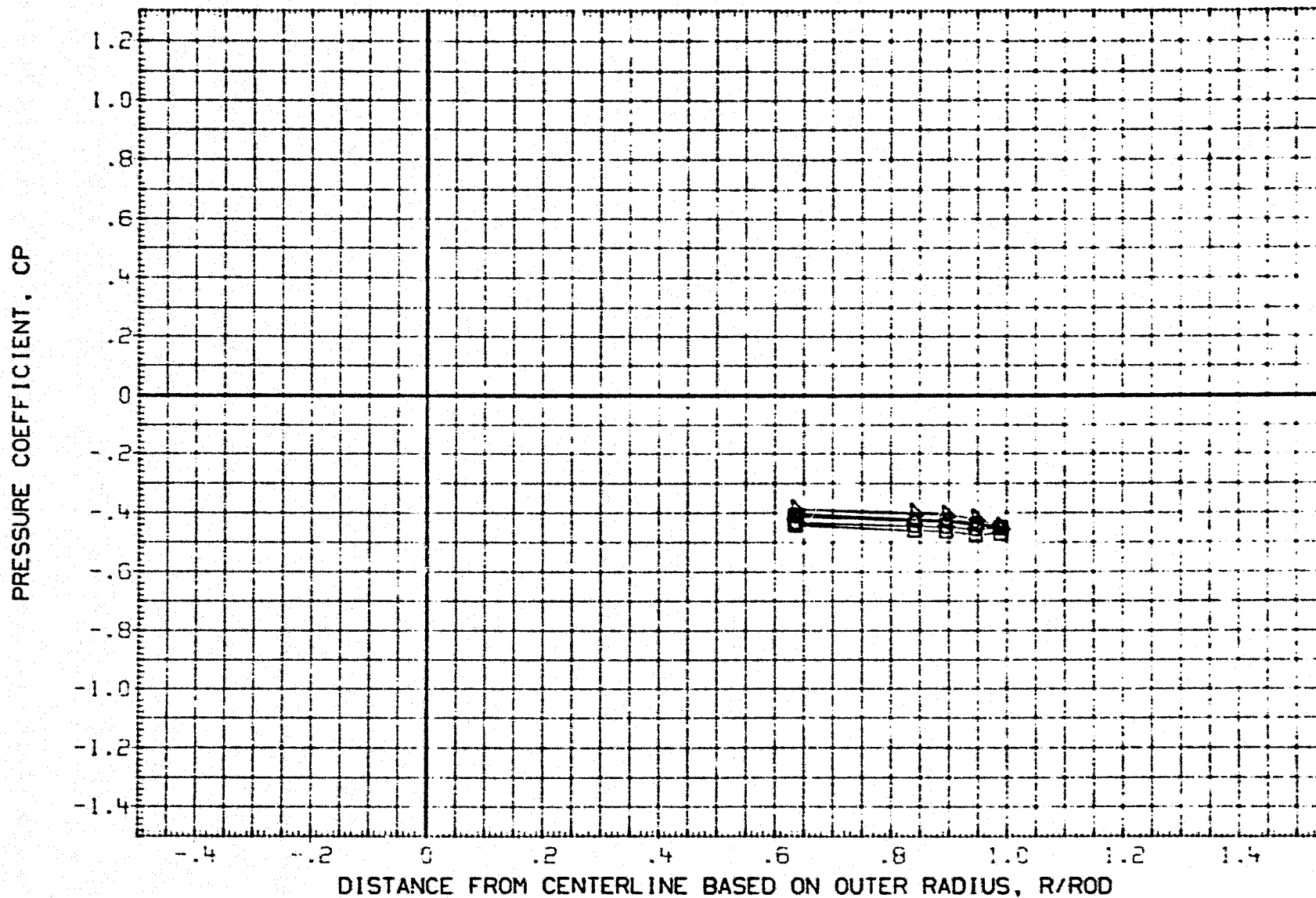


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(BE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(BE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(BE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N- 1 ET BASE	.000	.000	1.100	4.250
(BE4H13)	△	ARC11-0231A80 OTS(SRB=N ORB=N+ 1 ET BASE	.000	.000	1.100	4.250
(BE4H37)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.100	4.250
(BE4H32)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.100	4.250

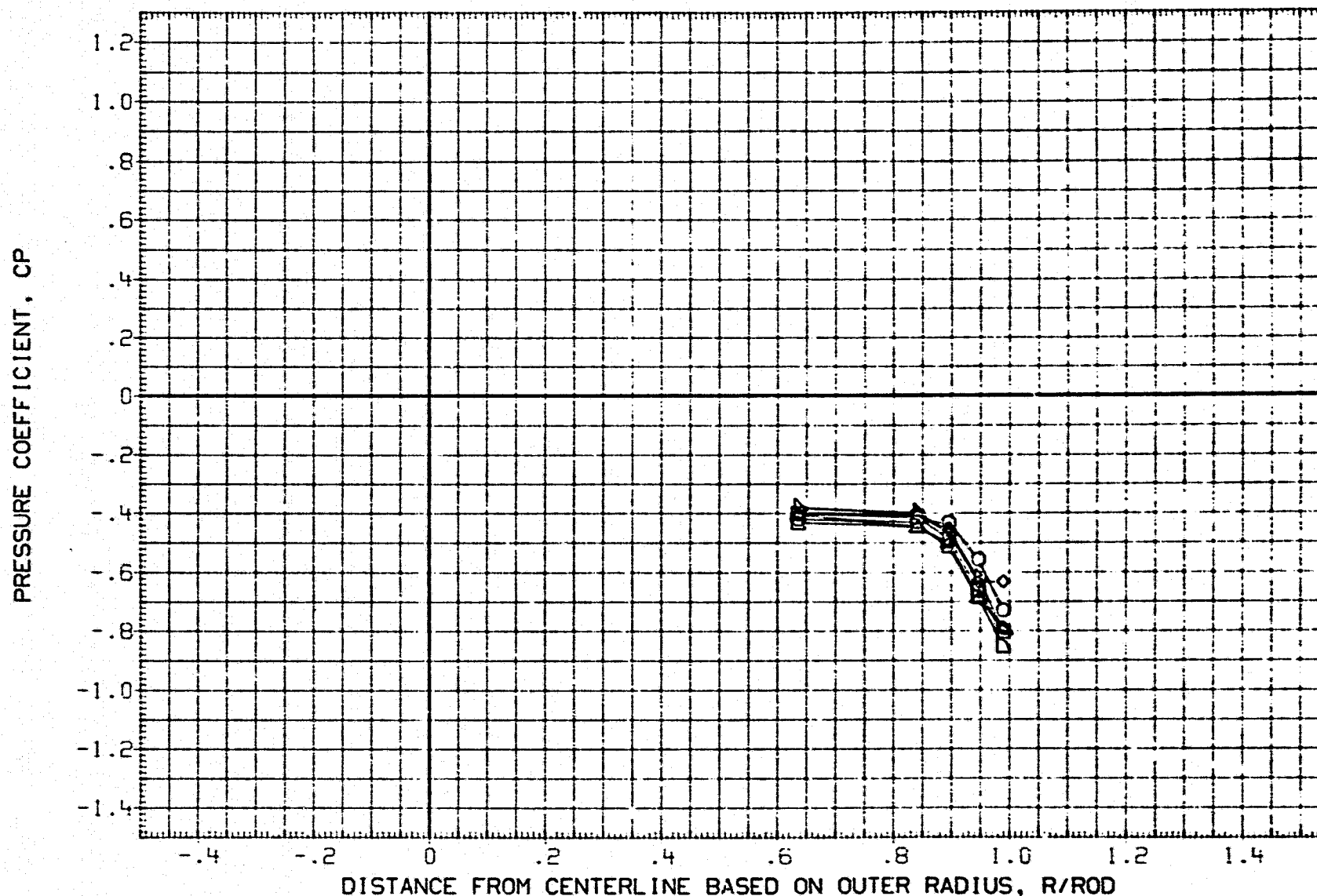


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PH = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H30)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.100	4.250
(BE4H22)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.100	4.250
(BE4H17)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.100	4.250
(BE4H13)	△	APC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.100	4.250
(BE4H07)	▽	APC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.100	4.250
(BE4H02)	D	APC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.100	4.250

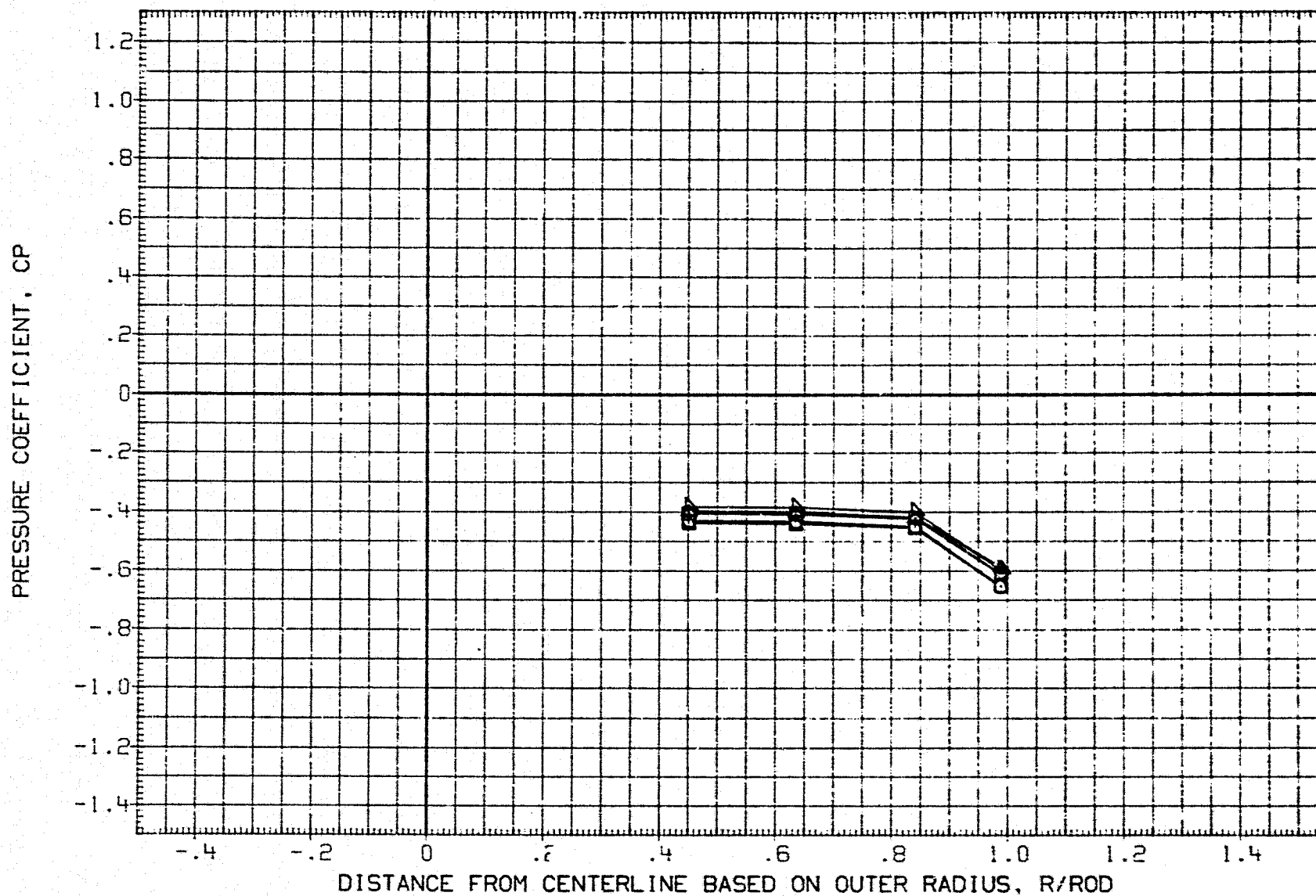


FIG. 132 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.1

ALPHA = .000 BETA = 4.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4H98)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(A1	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

PRESSURE COEFFICIENT, CP

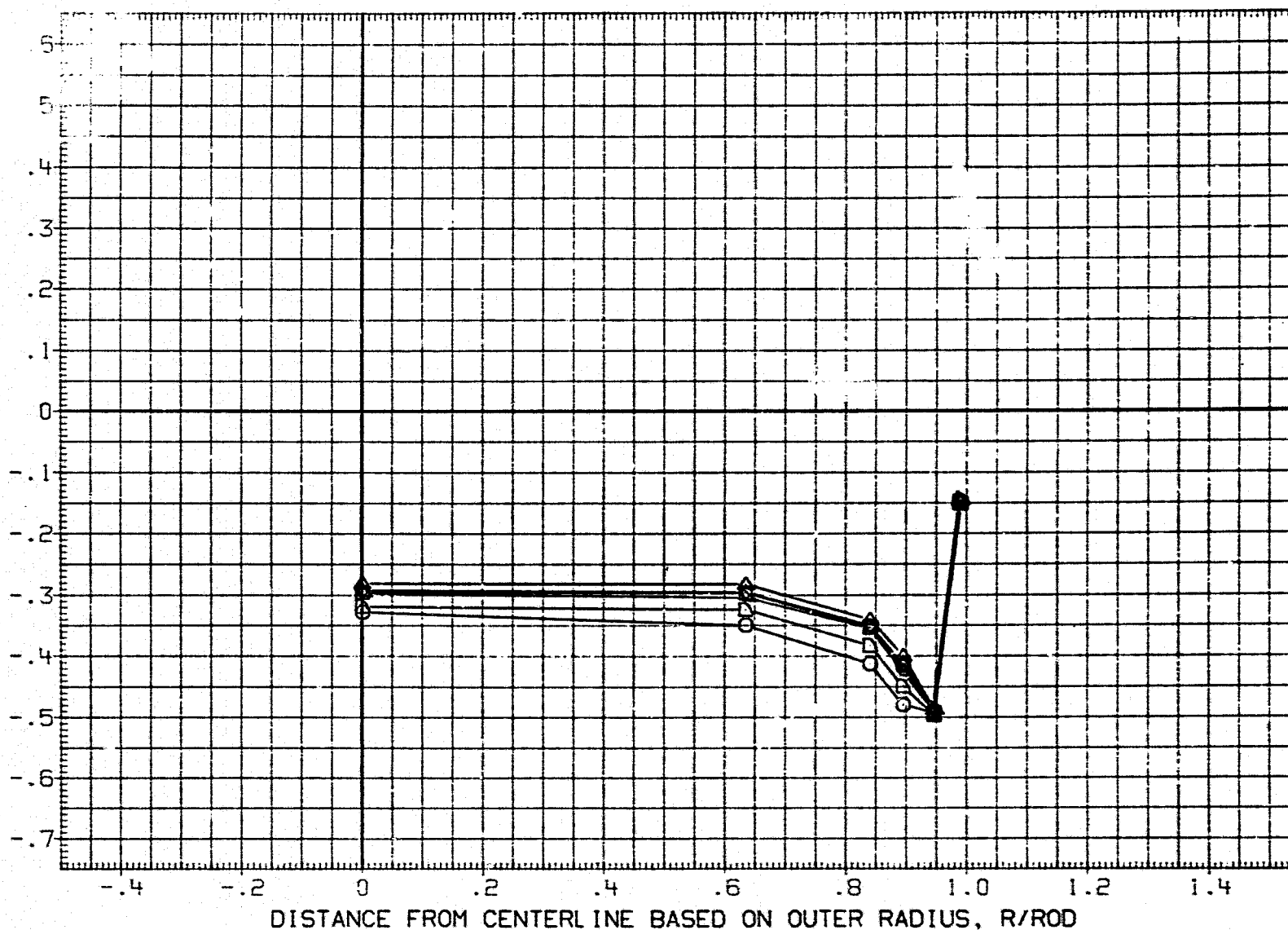


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = .000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AL4HB3)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4HB3)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

PRESSURE COEFFICIENT, CP

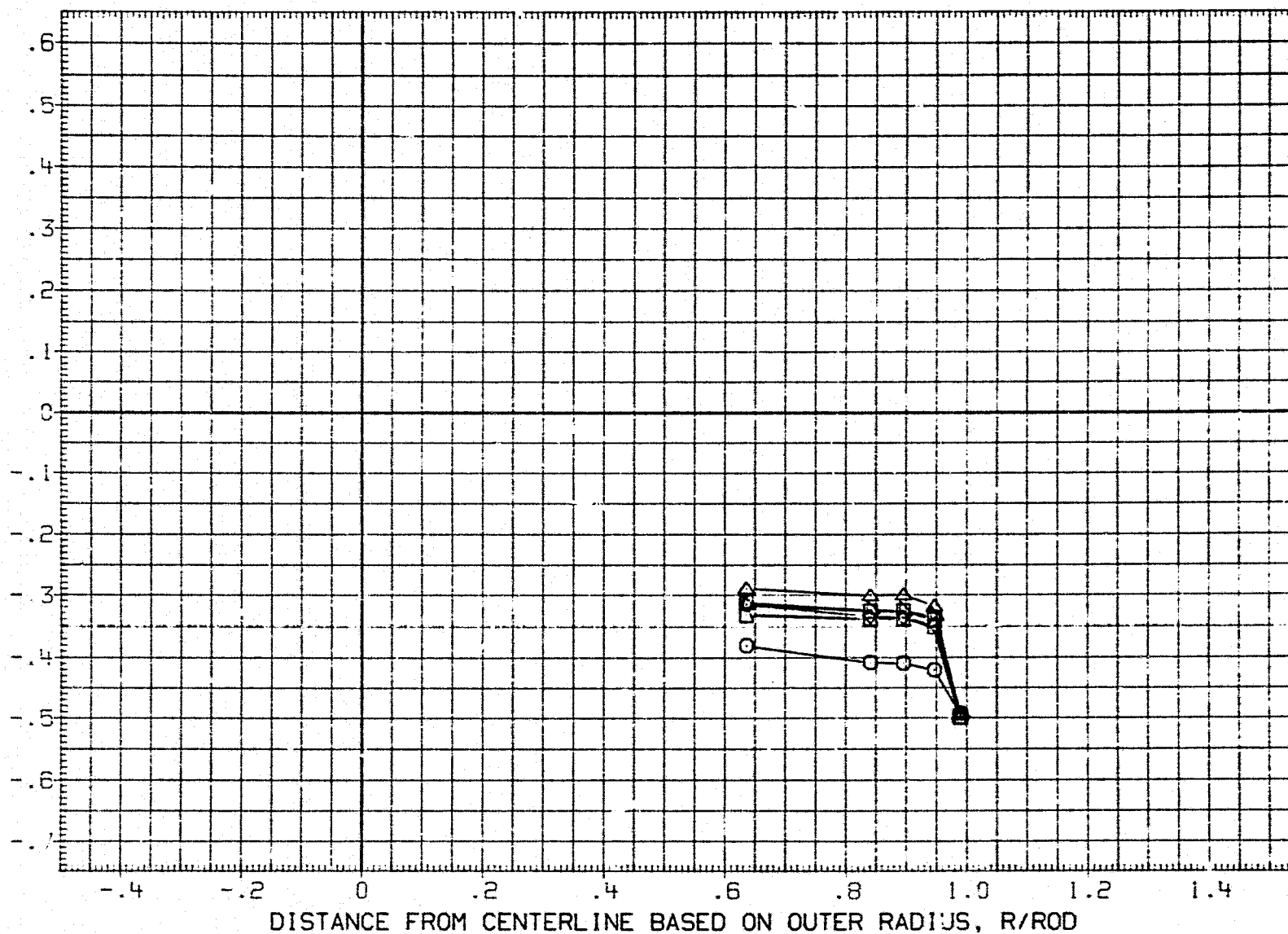


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H31)	○	ARC11-0231A80	OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80	OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80	OTS(SRB=N ORB=N-) ET BASE	.000	.000	.250	4.250
(AE4H14)	△	ARC11-0231A80	OTS(SRB=N ORB=N+) ET BASE	.000	.000	.250	4.250
(AE4HB8)	▽	ARC11-0231A80	OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	.250	4.250
(AE4HB3)	◊	ARC11-0231A80	OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	.250	4.250

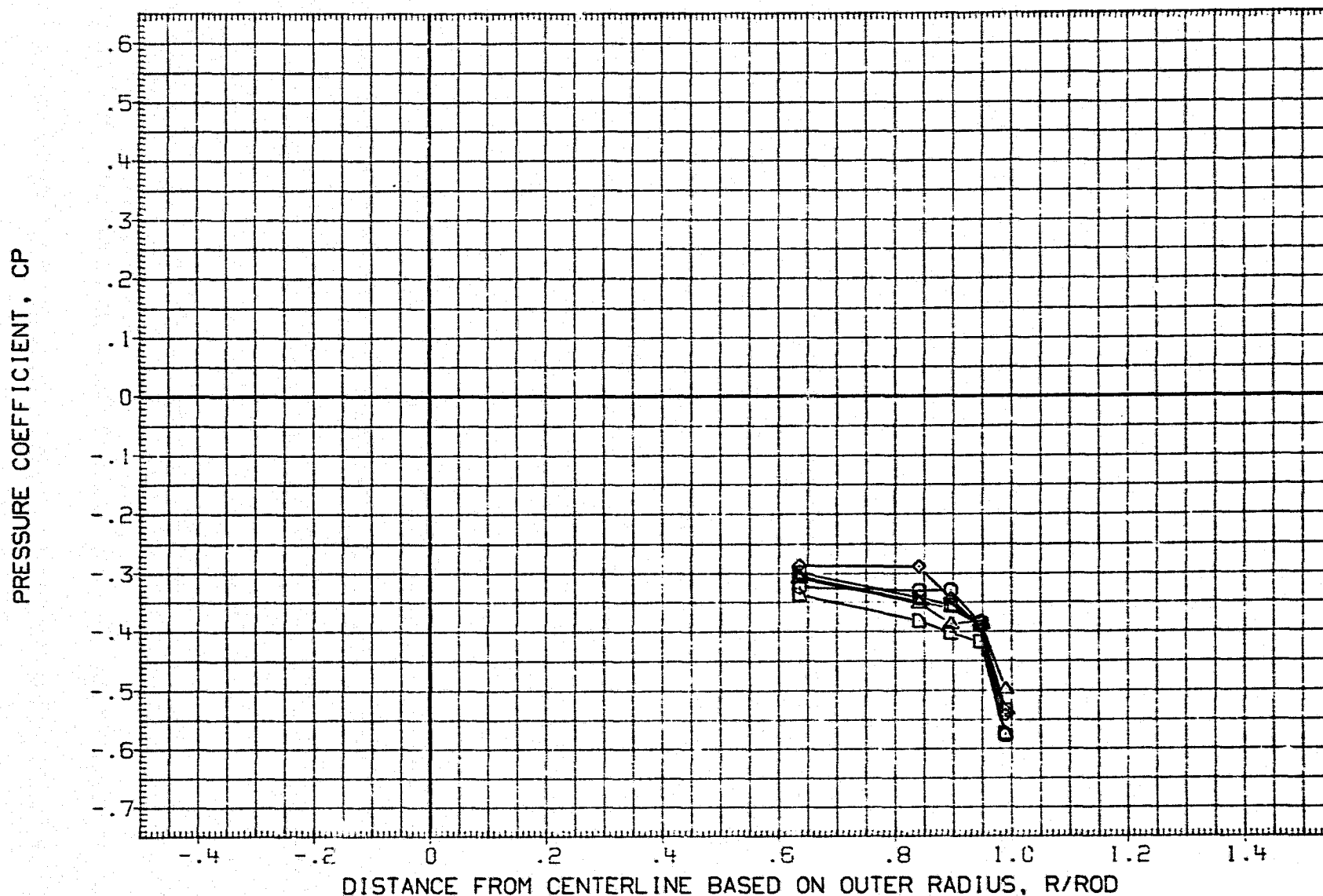


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4HB3)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

PRESSURE COEFFICIENT, CP

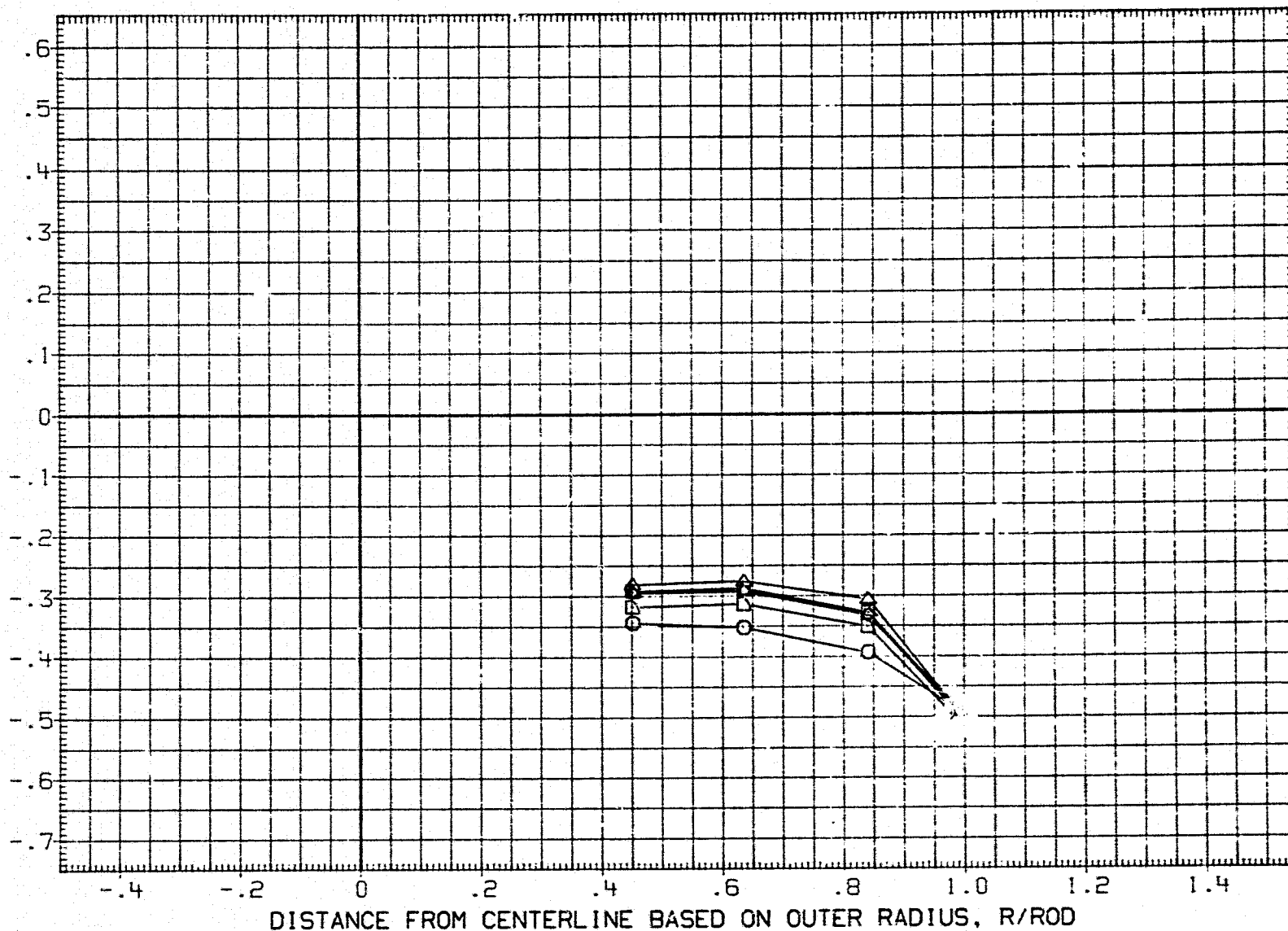


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = -4.000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H10)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) FT BASE	.000	.000	1.250	4.250
(AE4H08)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.250	4.250
(AE4H03)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.250	4.250

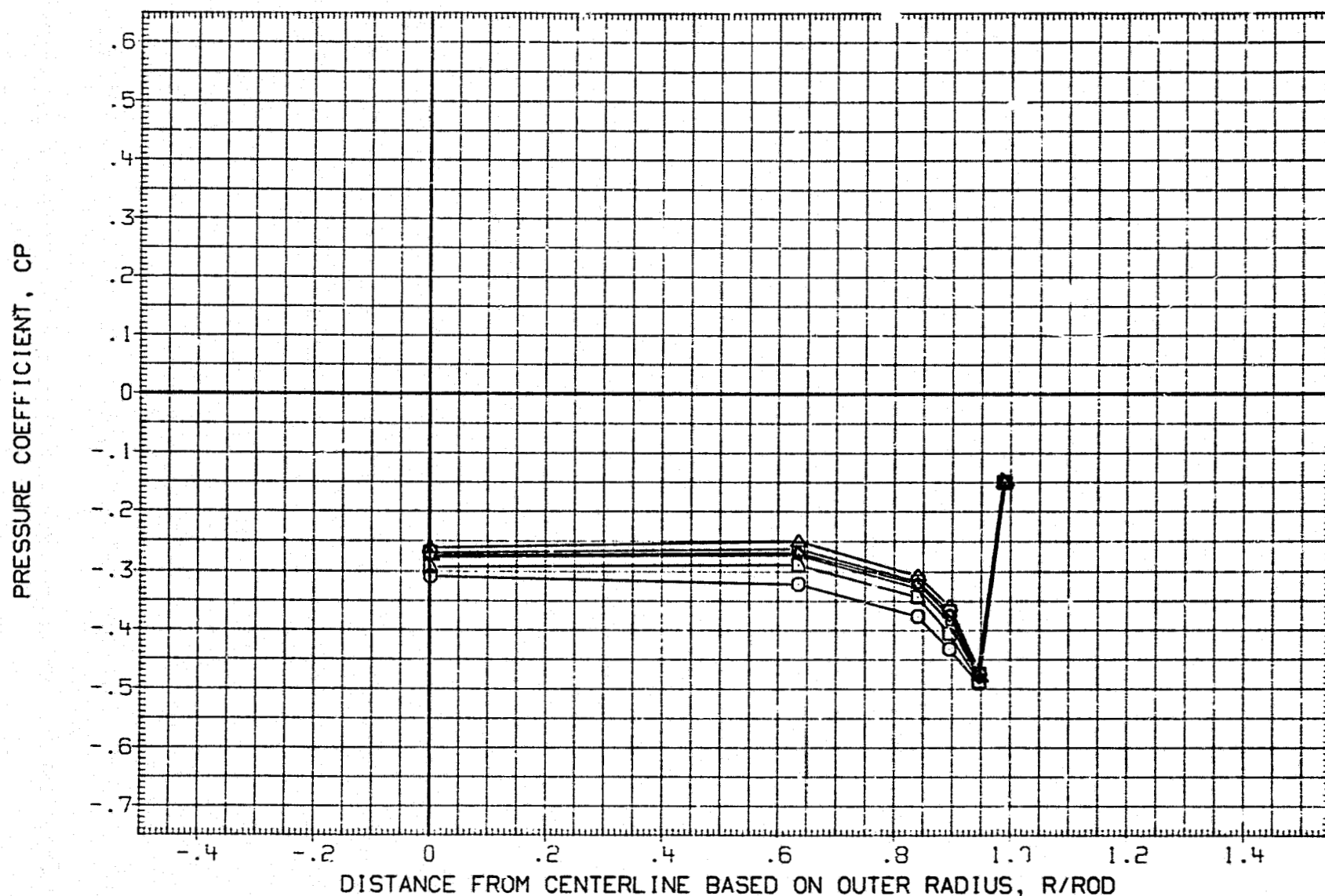


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4HB3)	◊	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

PRESSURE COEFFICIENT, CP

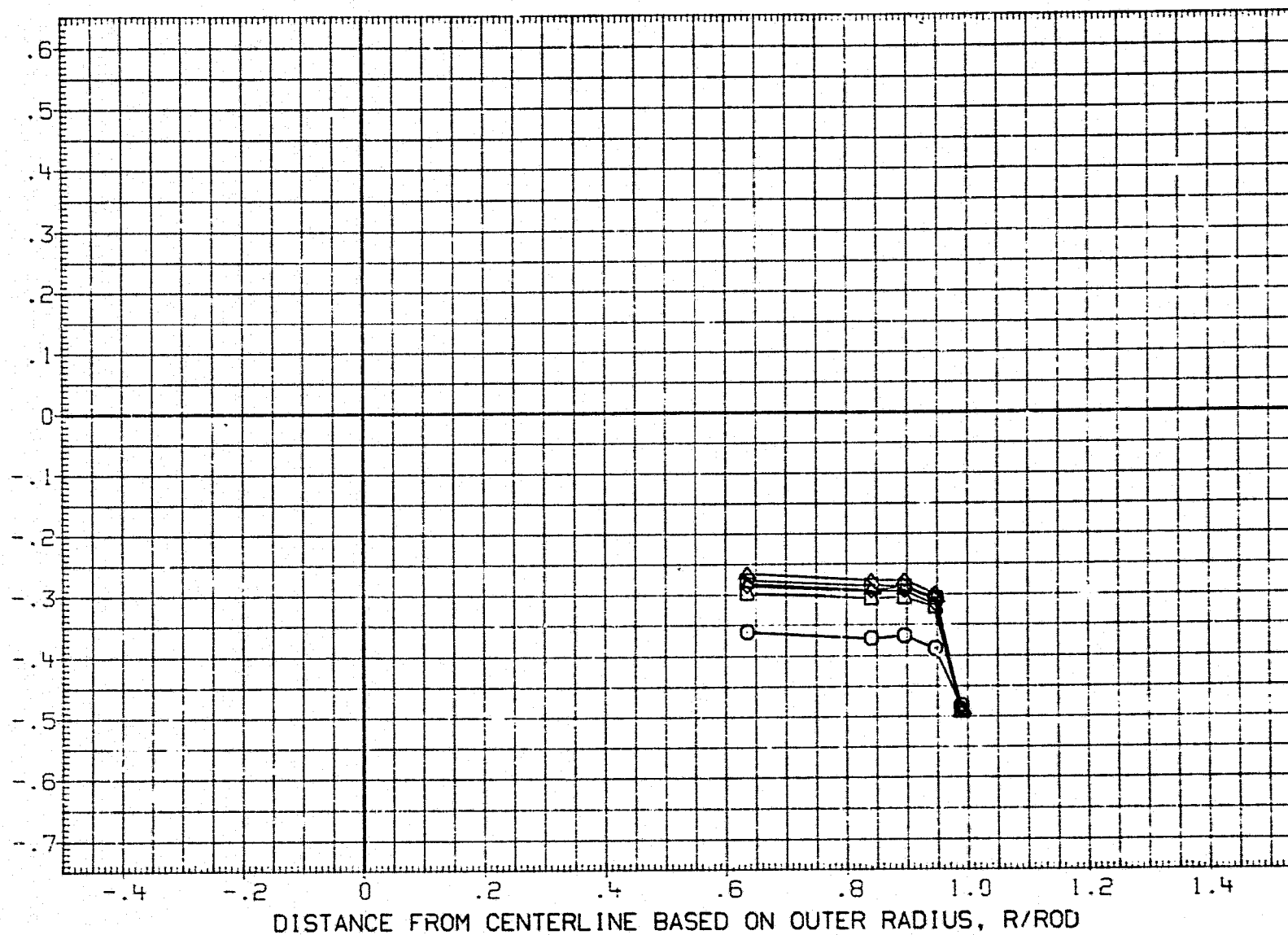


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4H90)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4H93)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

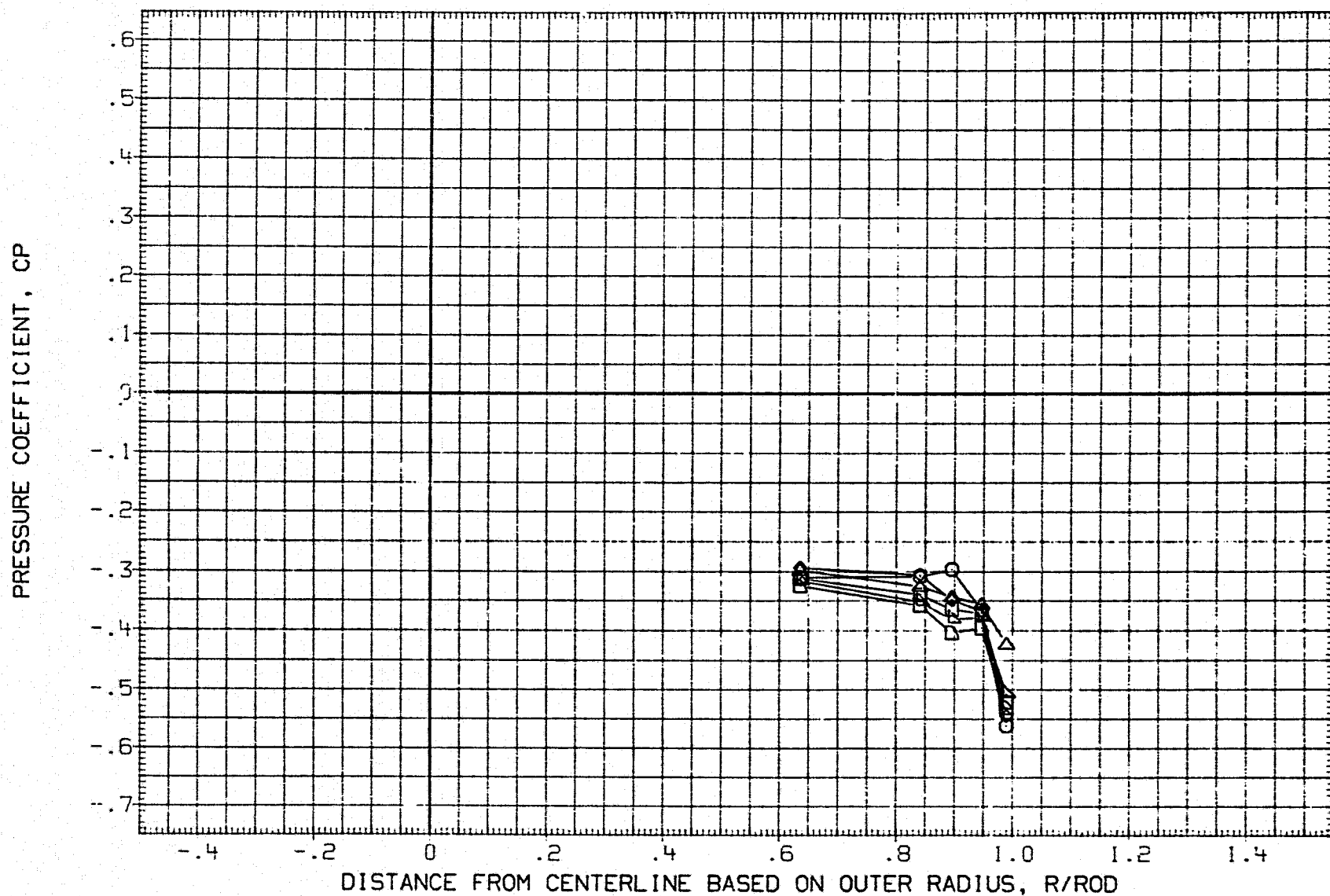


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OB	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4HB3)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

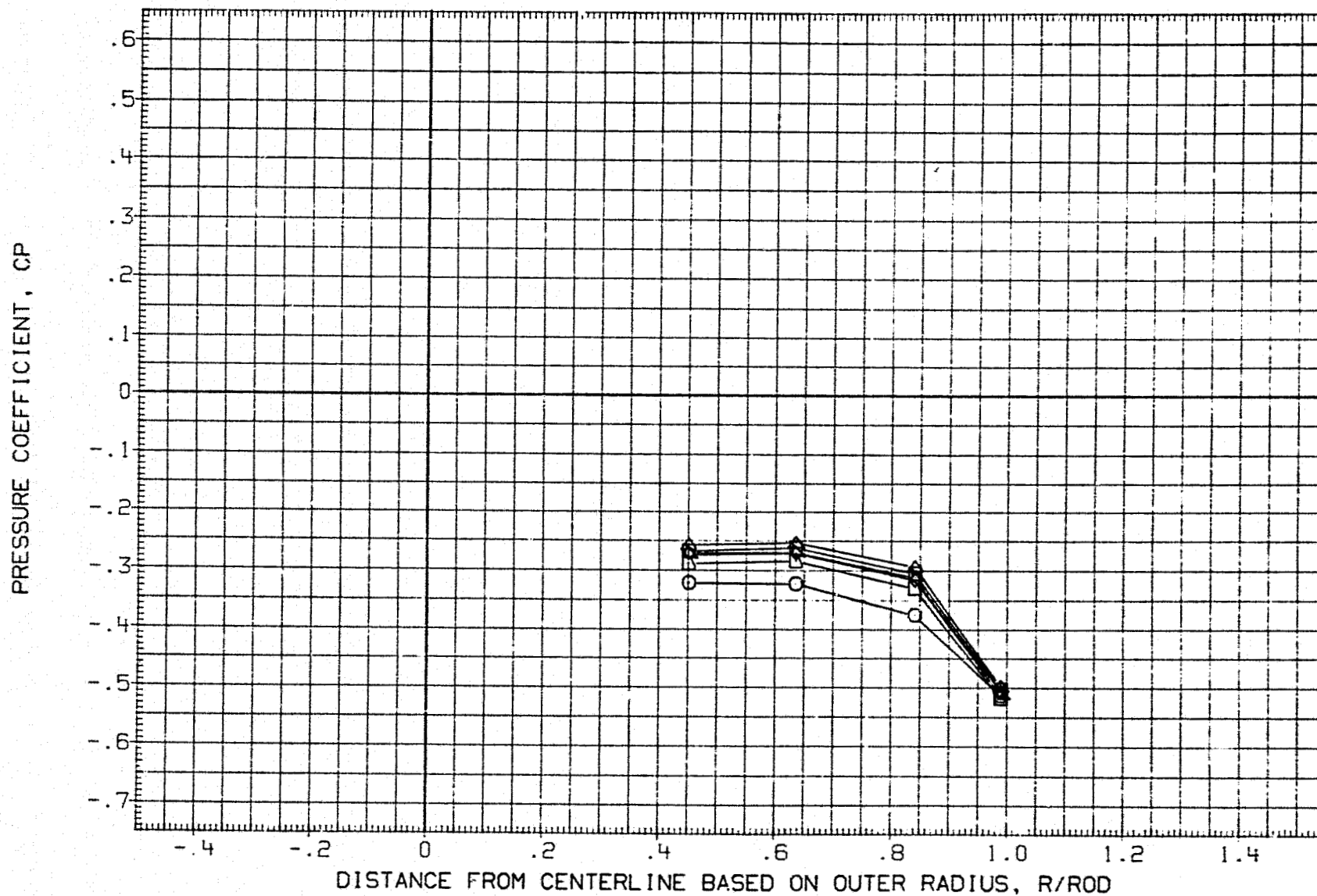


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N CRB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4HBB)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.030	.000	1.250	4.250
(AE4HB3)	◊	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

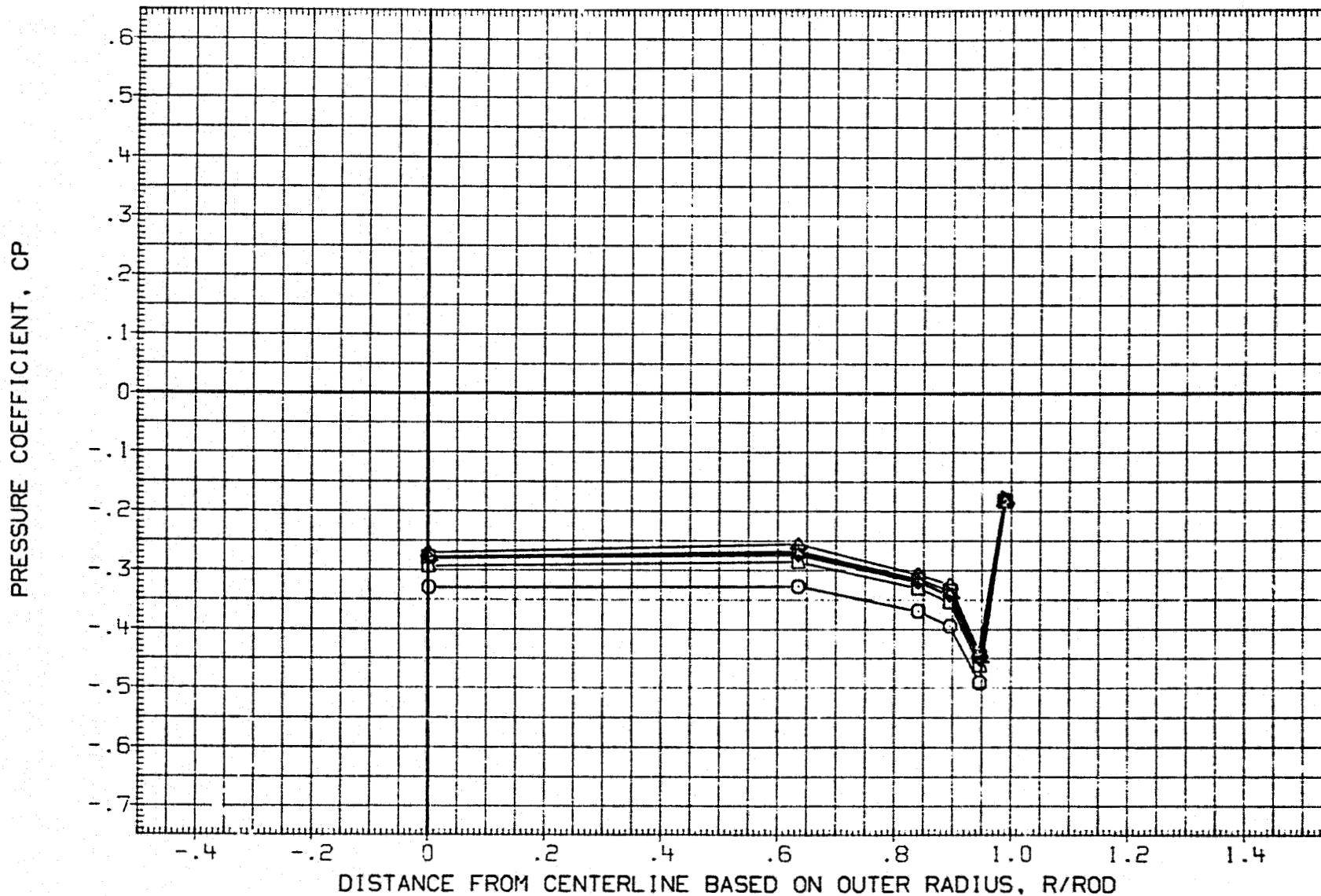


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A60 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4H88)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4H83)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

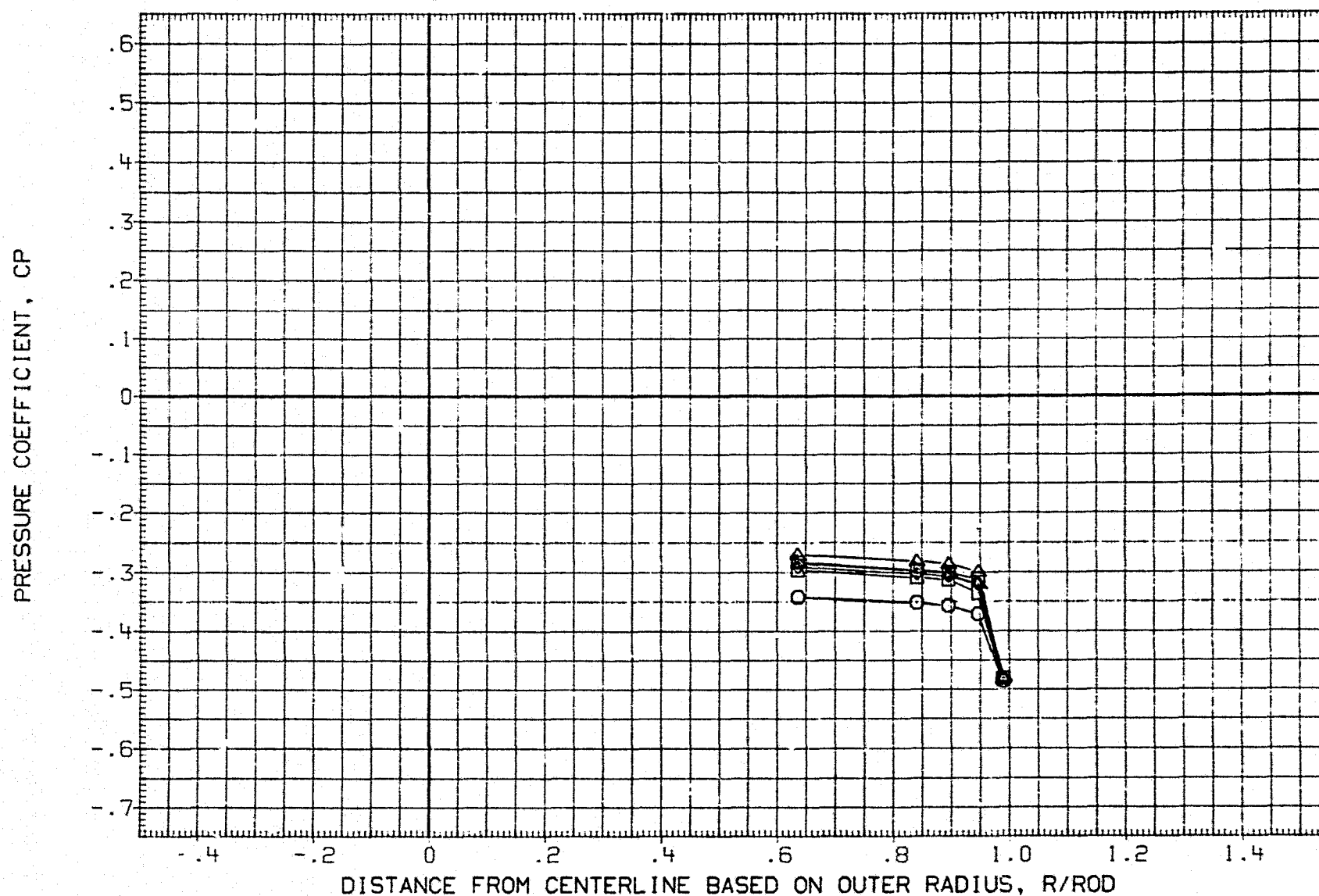


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4HB3)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

PRESSURE COEFFICIENT, CP

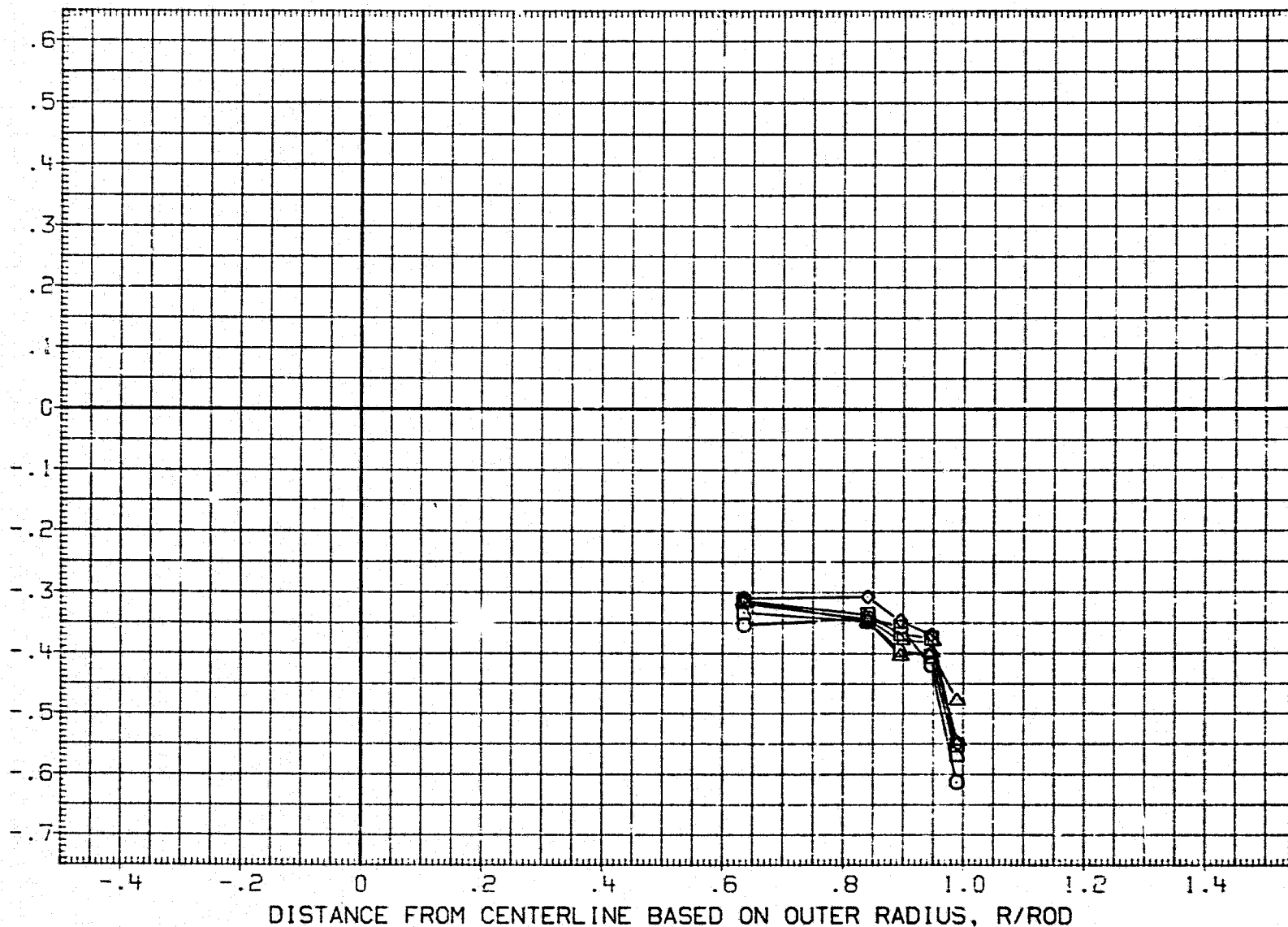


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = 180.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(AE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(AE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(AE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(AE4HB3)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

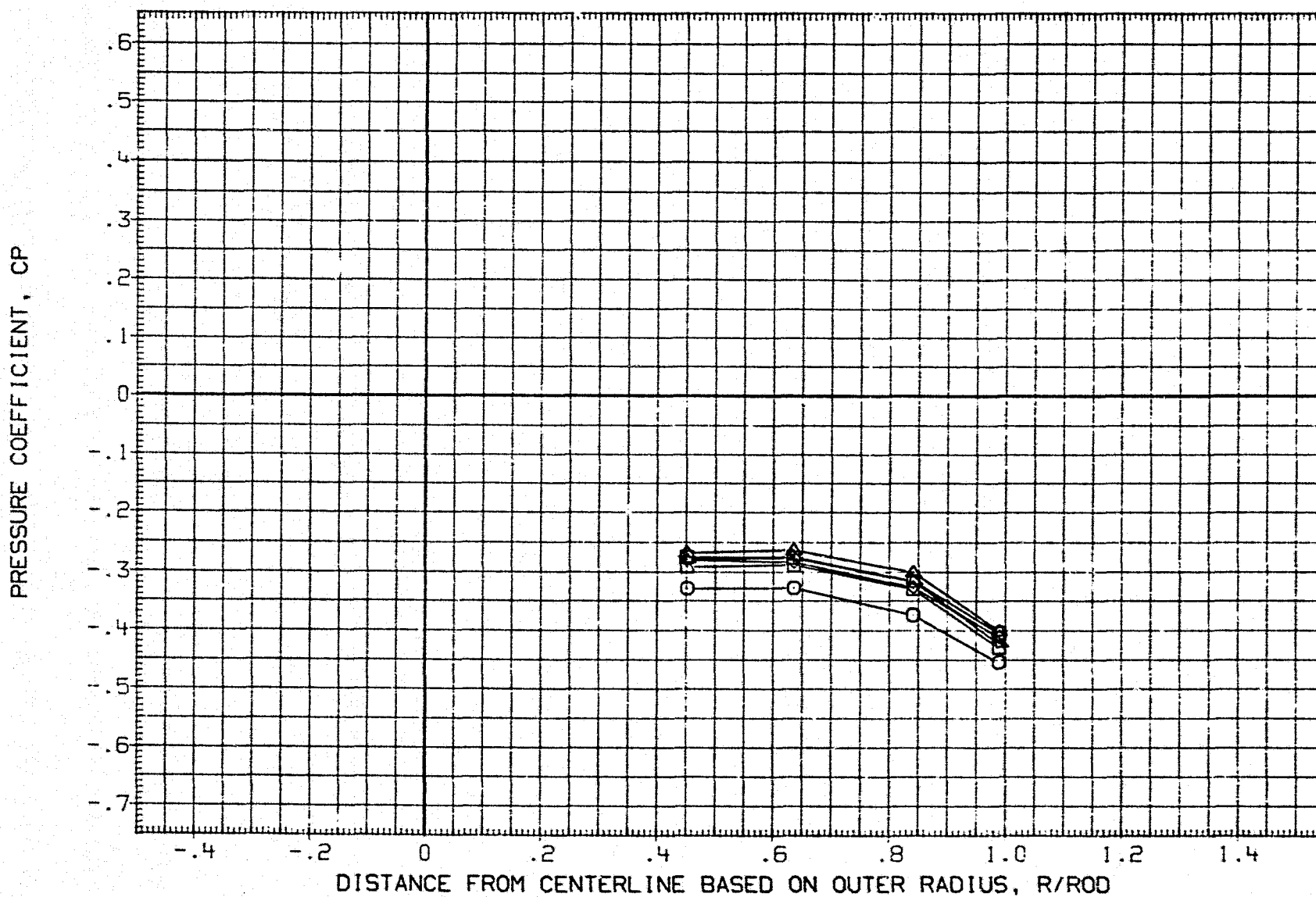


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = 4.000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H31)	□	ARC11-023(A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-023(A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.350
(BE4H18)	◇	ARC11-023(A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-023(A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4H08)	▽	ARC11-023(A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4H03)	◇	ARC11-023(A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

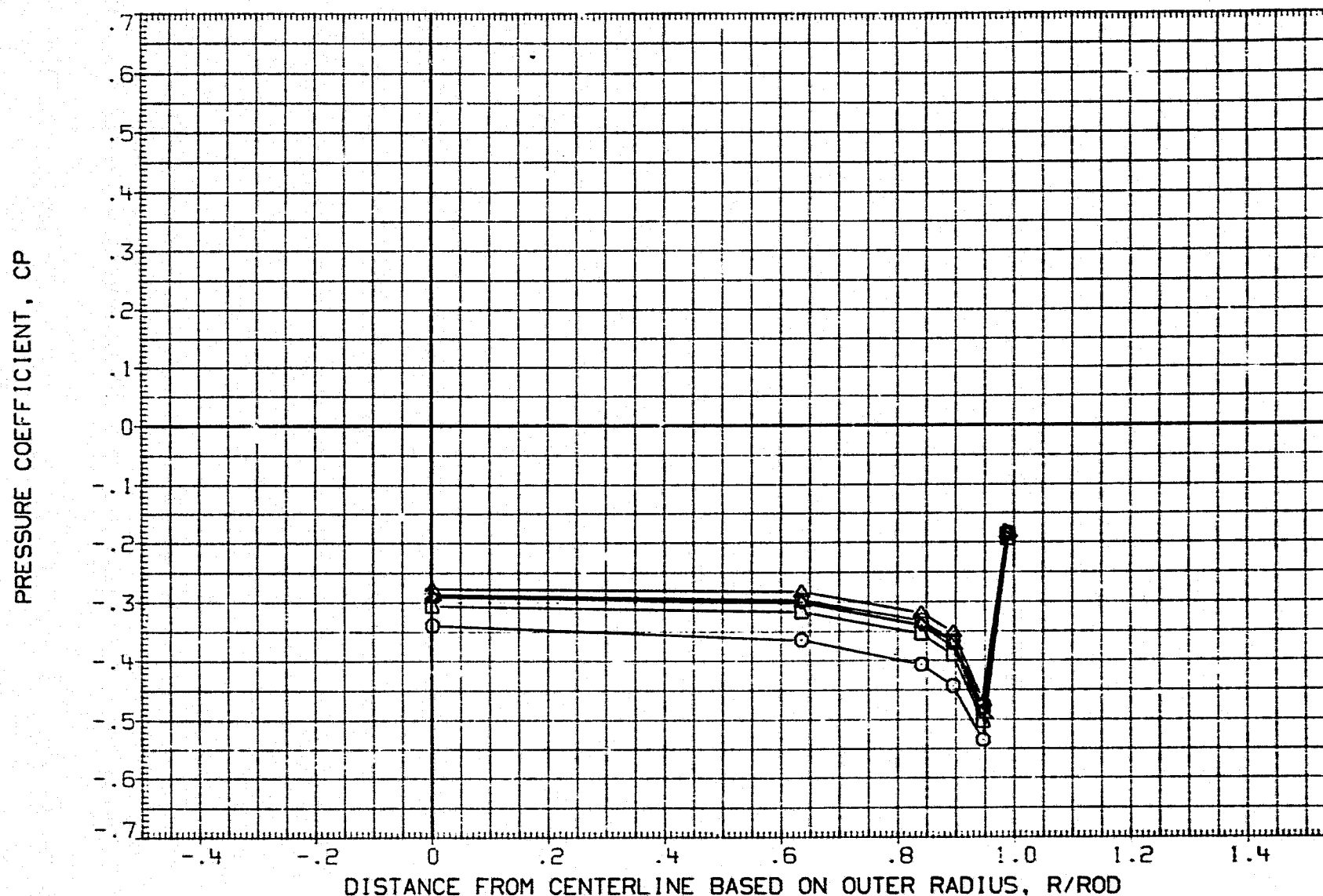


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4H08)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4H03)	▢	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

PRESSURE COEFFICIENT, CP

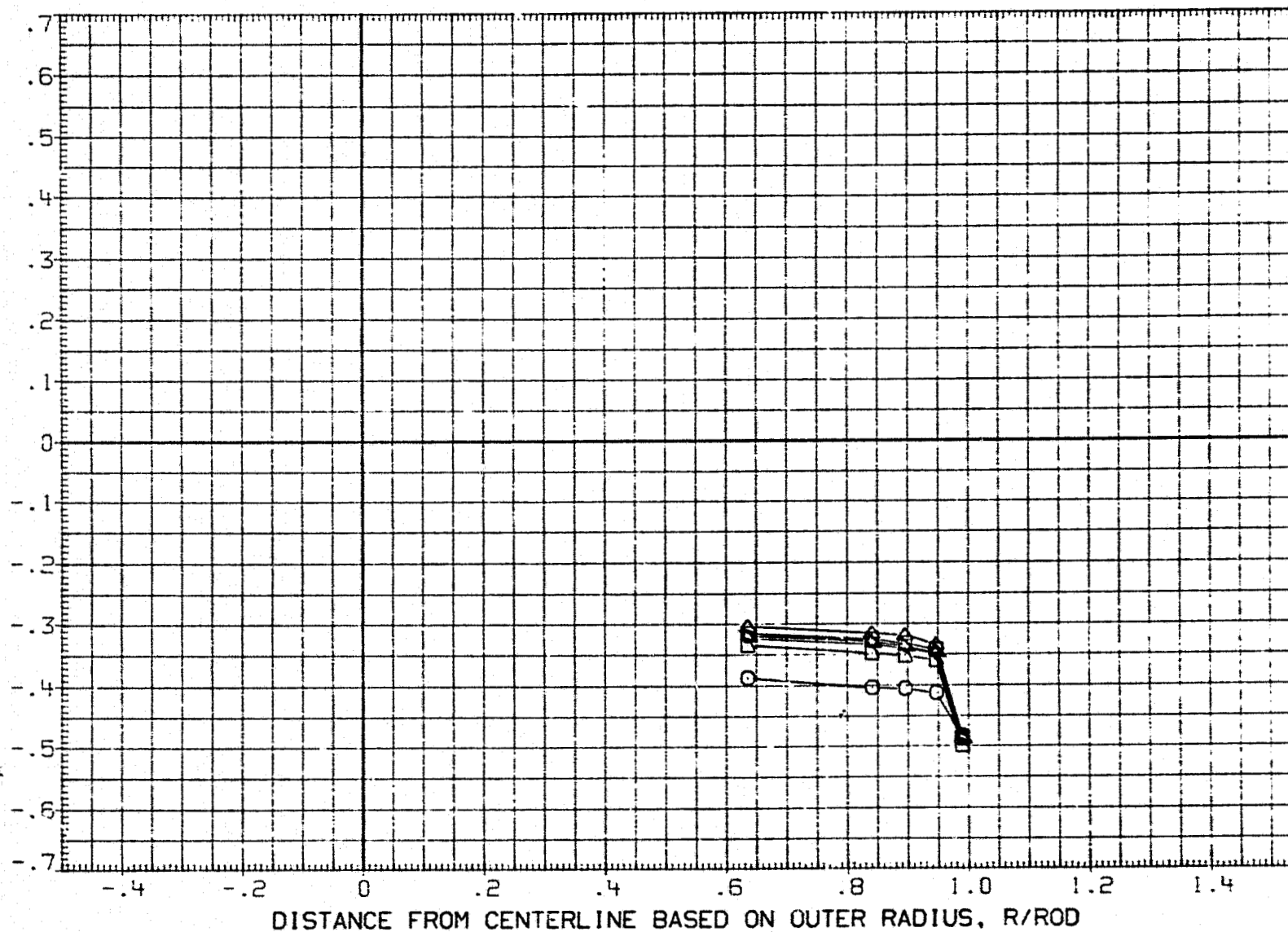


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = -4.000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4H38)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4H33)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

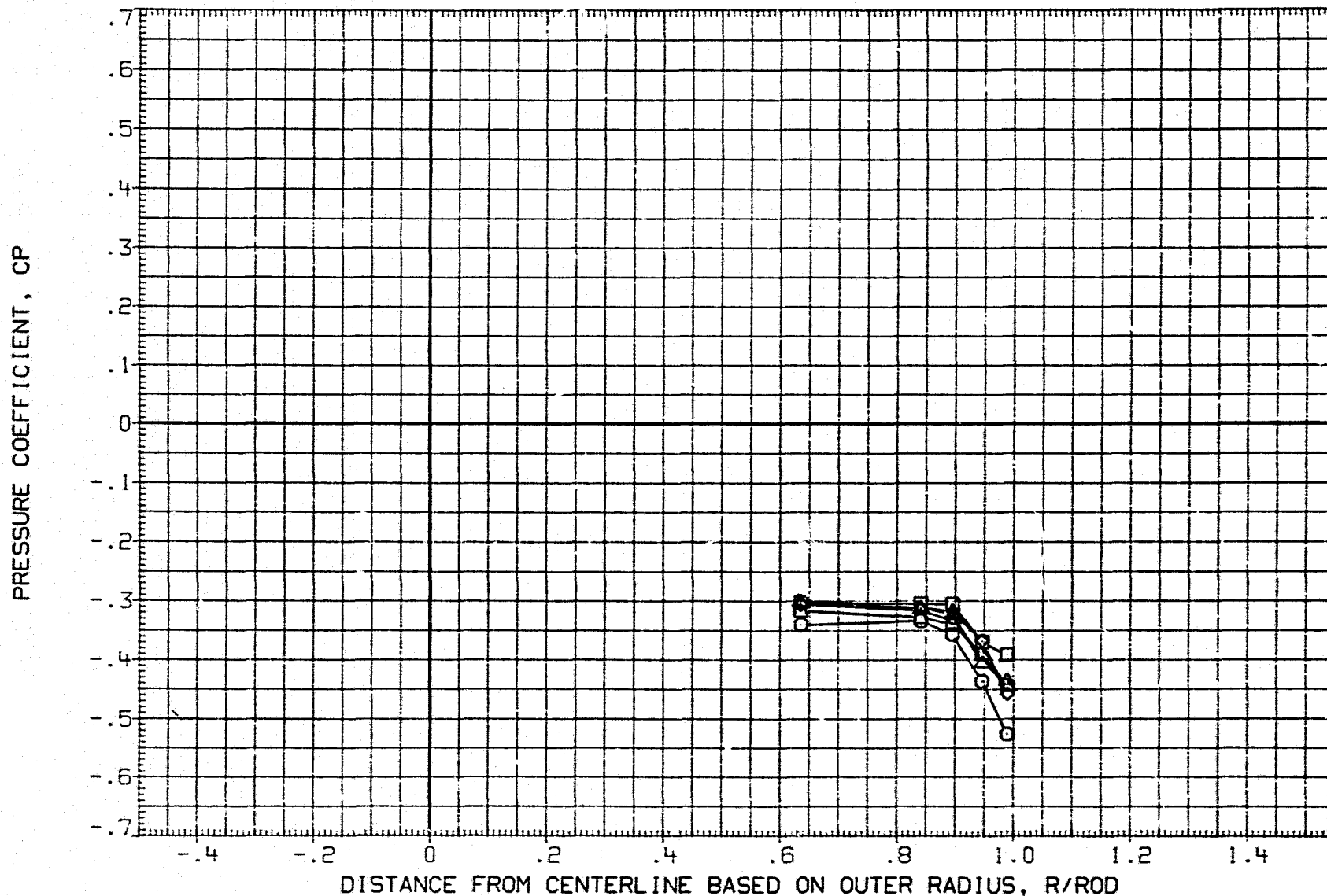


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4H98)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4H83)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

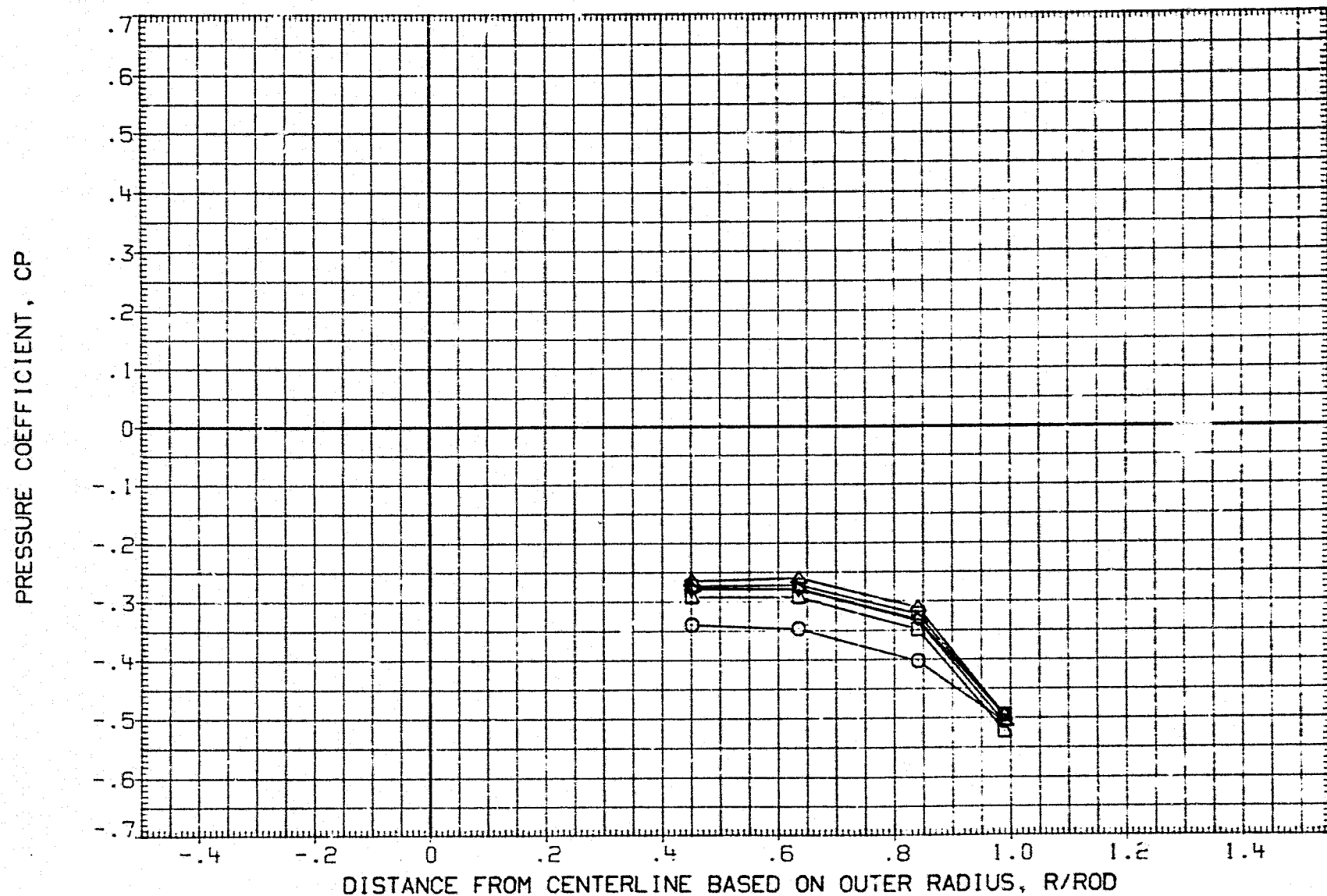


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = -4.000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4H88)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.250	4.250
(BE4H93)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.250	4.250

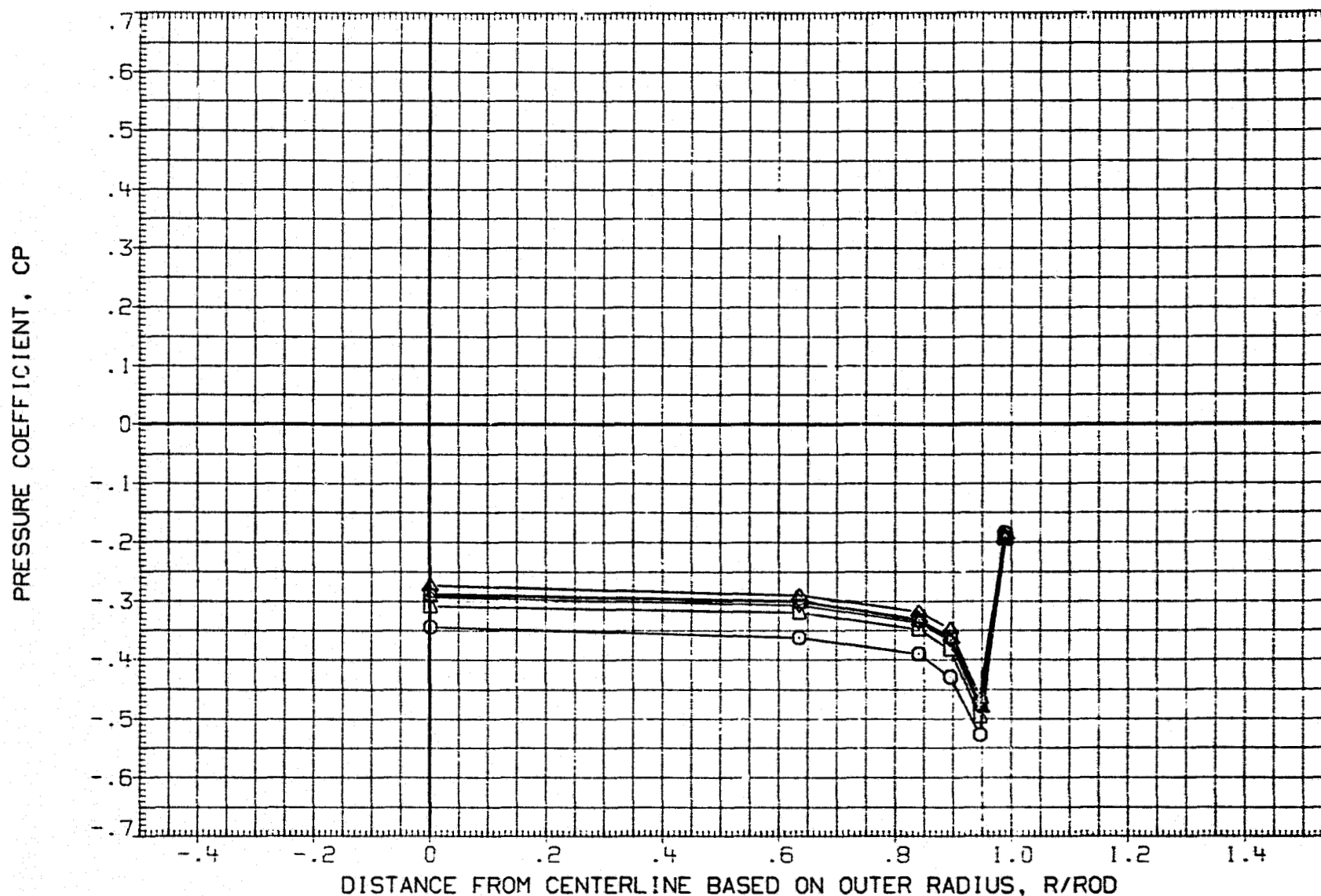


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = .000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4HB3)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

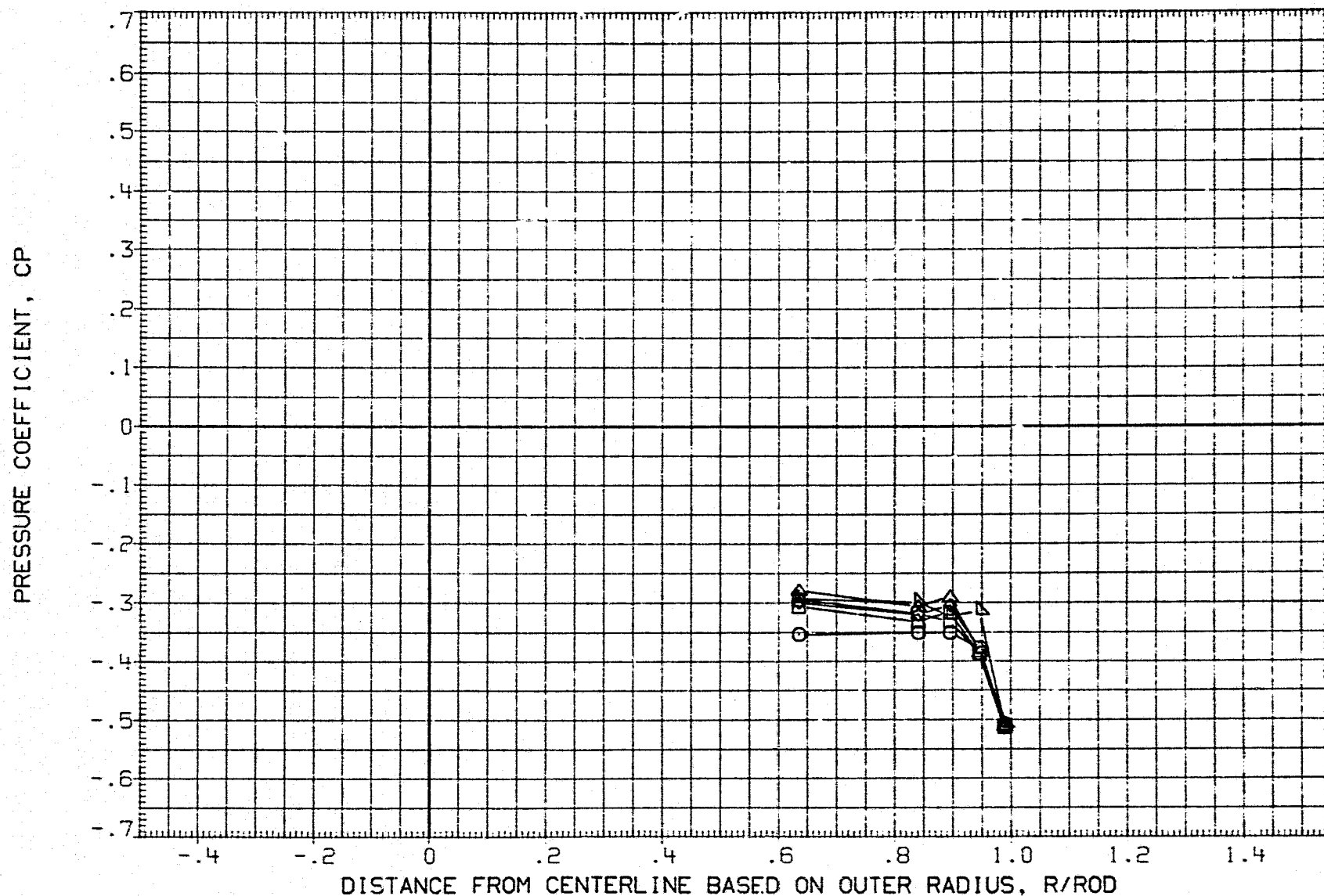


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORP=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4HB8)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4HB3)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

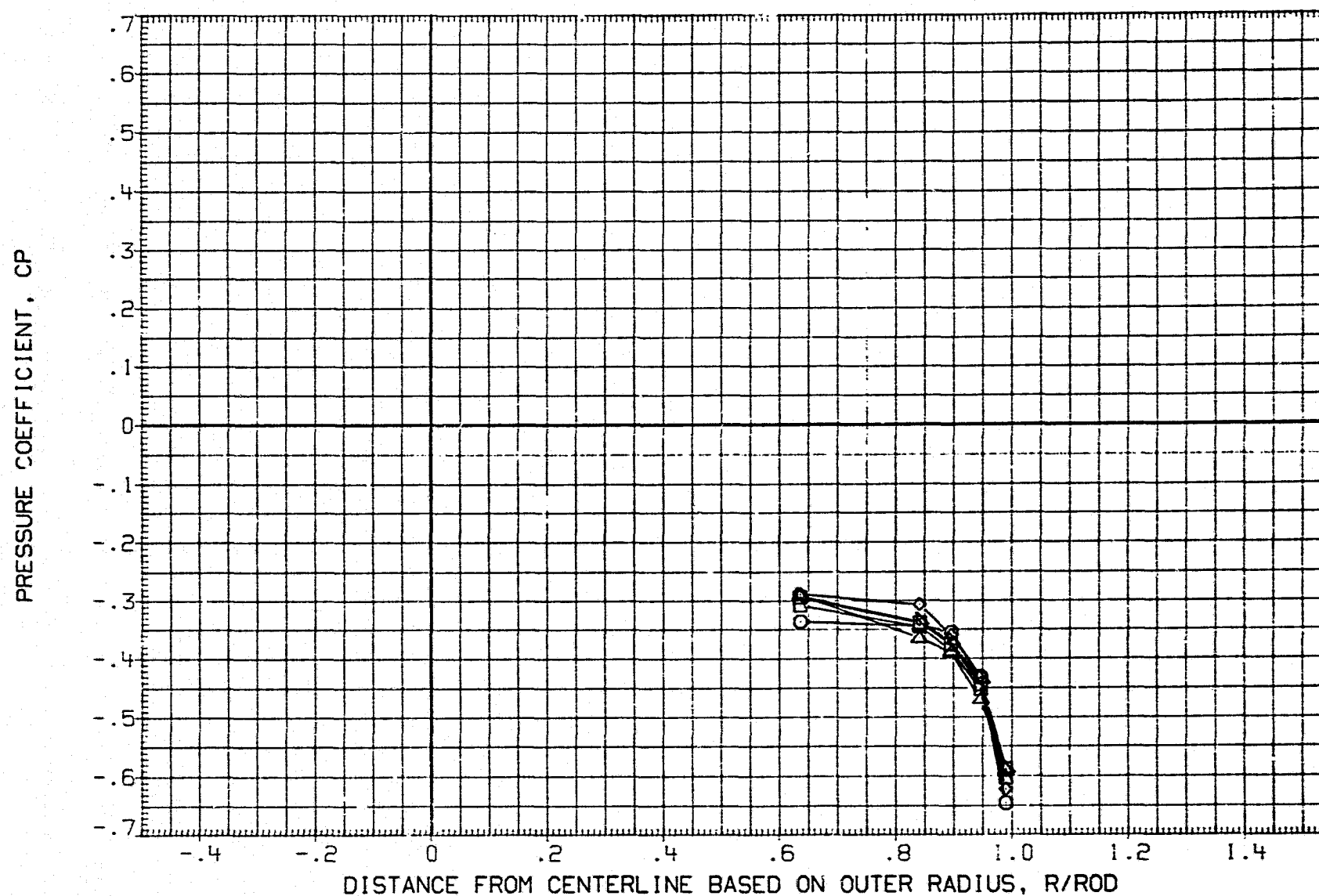


FIG. 133 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = 180.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H31)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.250	4.250
(BE4H23)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.250	4.250
(BE4H18)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.250	4.250
(BE4H14)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.250	4.250
(BE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.250	4.250
(BE4HB3)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.250	4.250

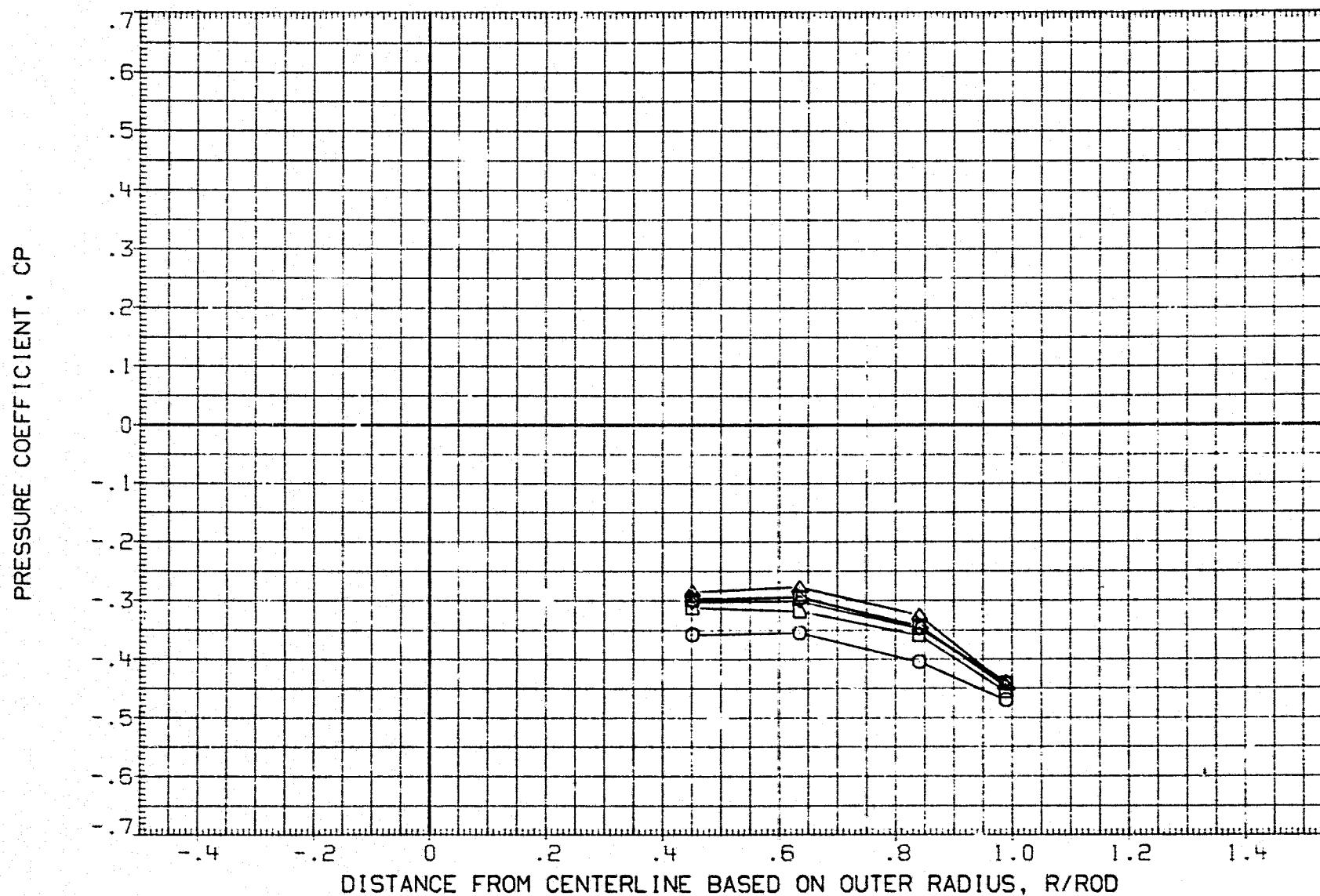


FIG. 130 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.25

ALPHA = .000 BETA = 4.000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	△	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4H99)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.400	4.250
(AE4H64)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.400	4.250

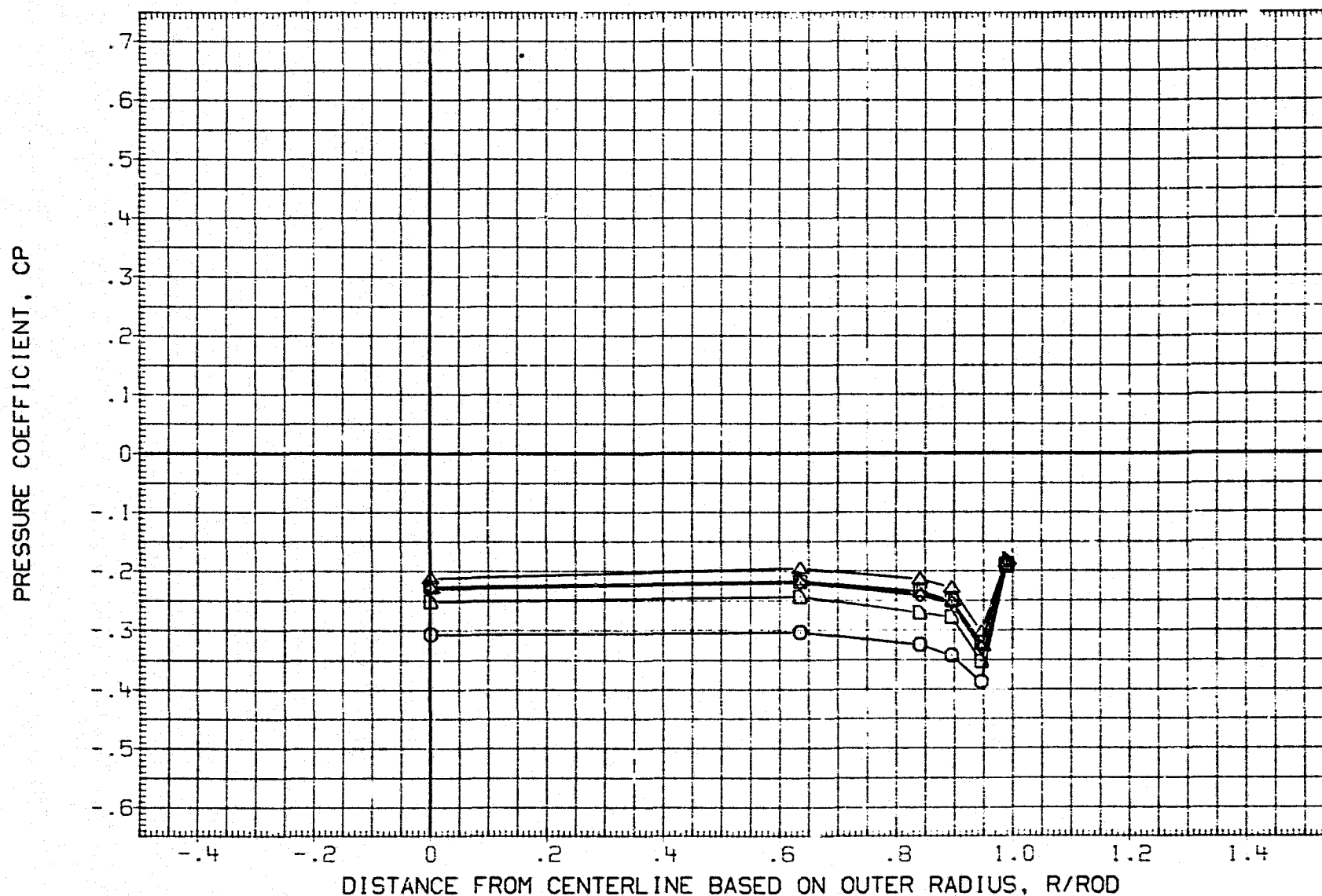


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4H99)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	◇	ARC11-0231A80 O'S(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

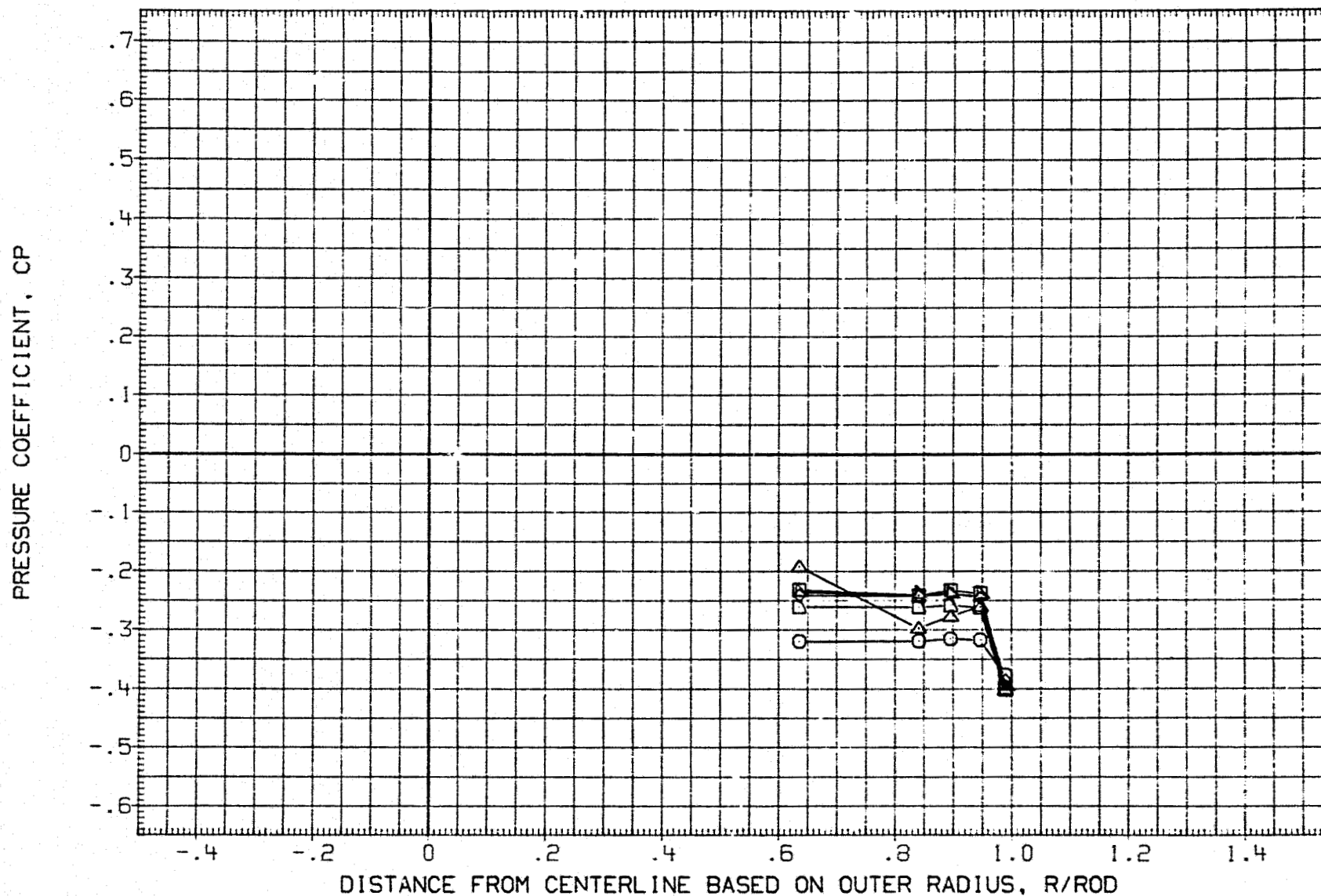


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4H09)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4H04)	◻	ARC11-0231A80 OTS(SRB=N CRB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

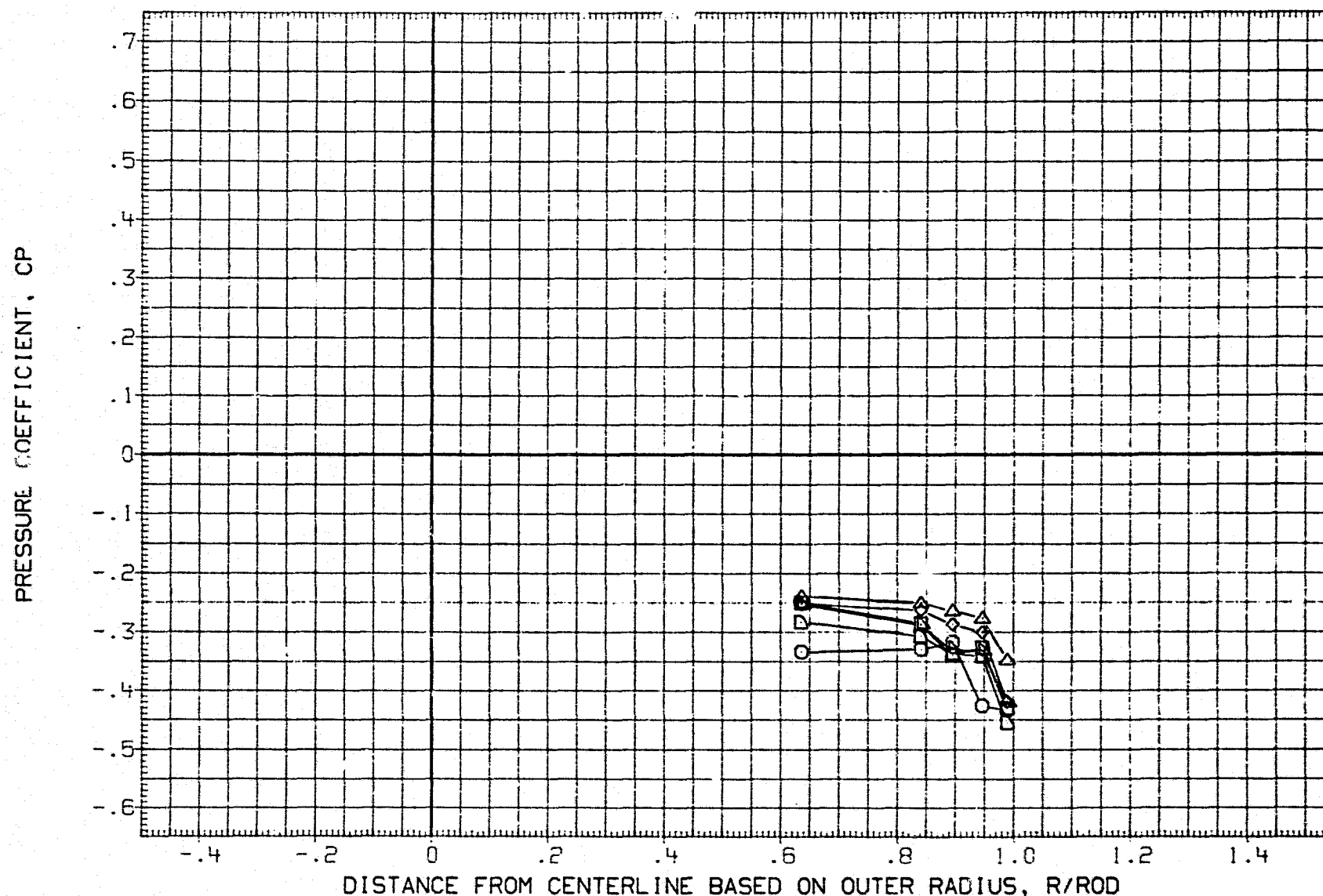


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = 180.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

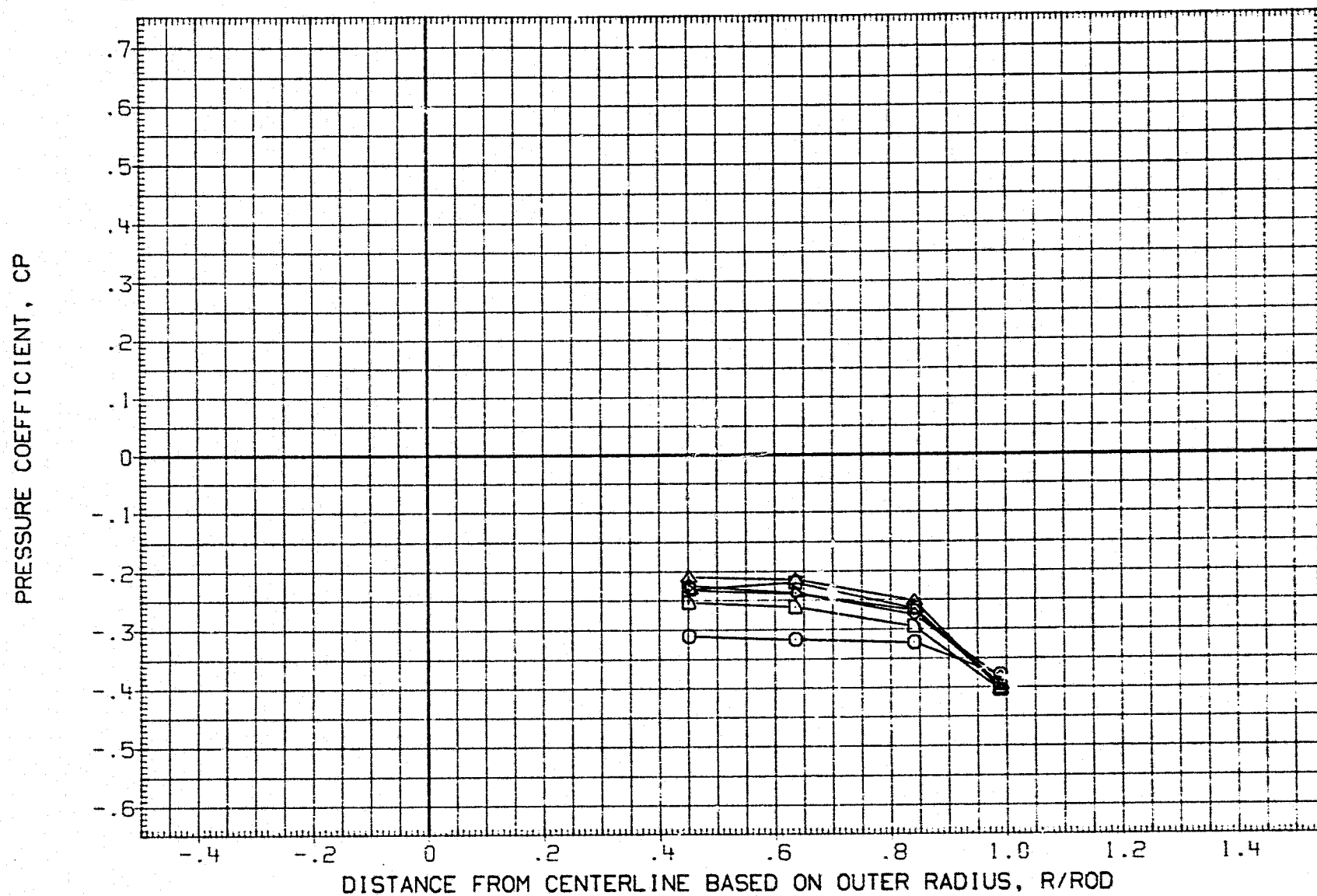


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = -4.000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4HB9)	▲	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	▢	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

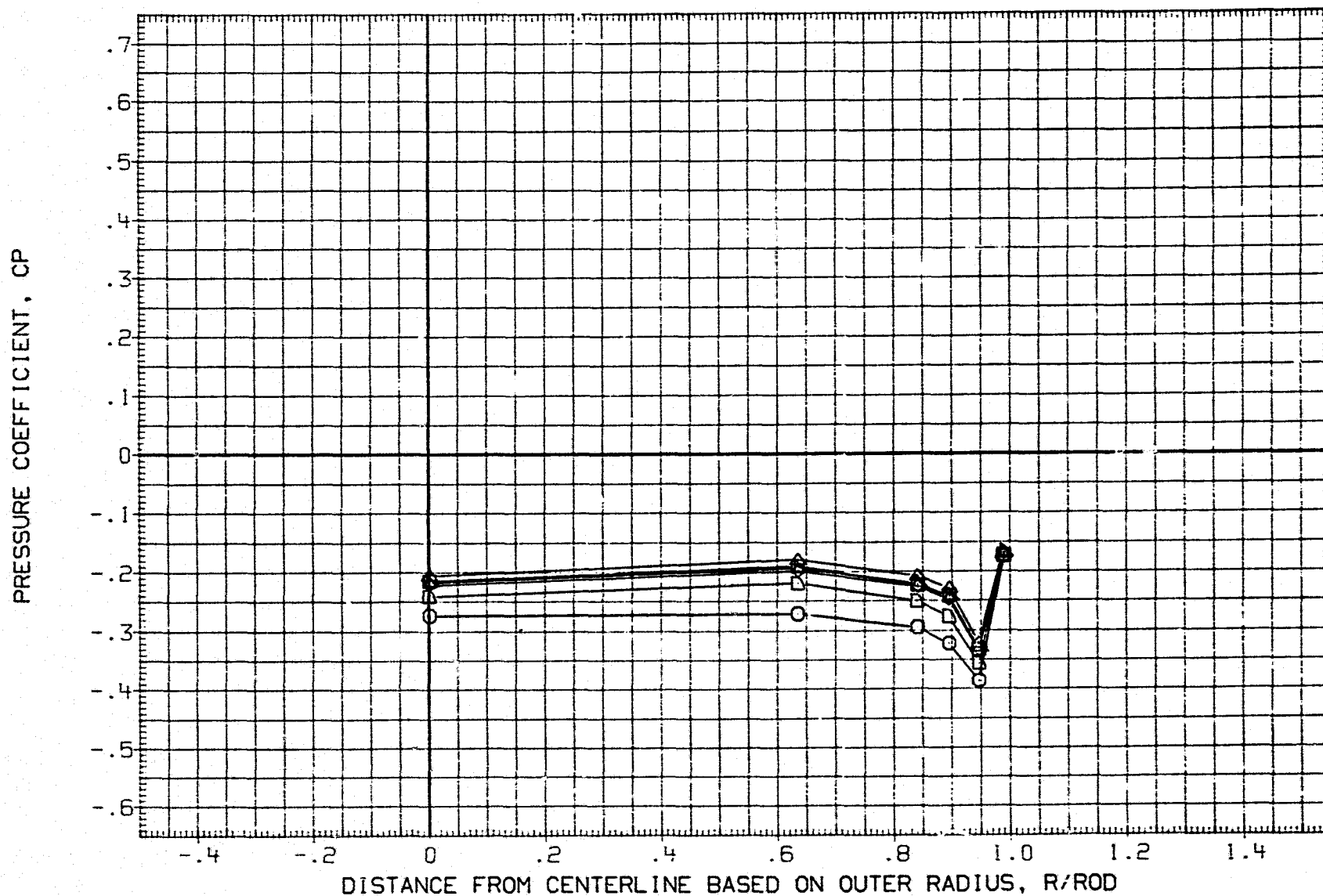


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

PRESSURE COEFFICIENT, CP

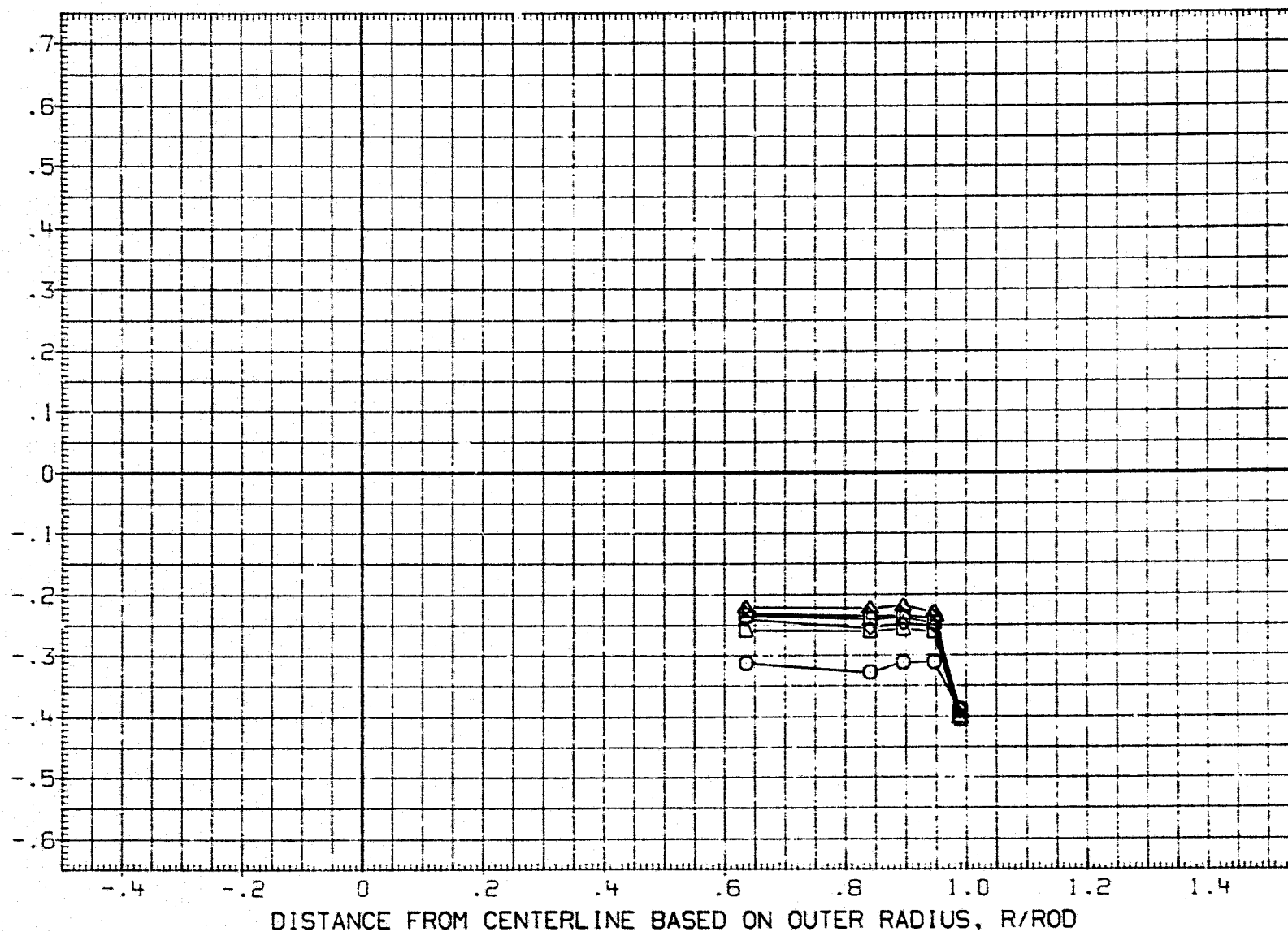


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = 90.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4H89)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.400	4.250
(AE4H84)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.400	4.250

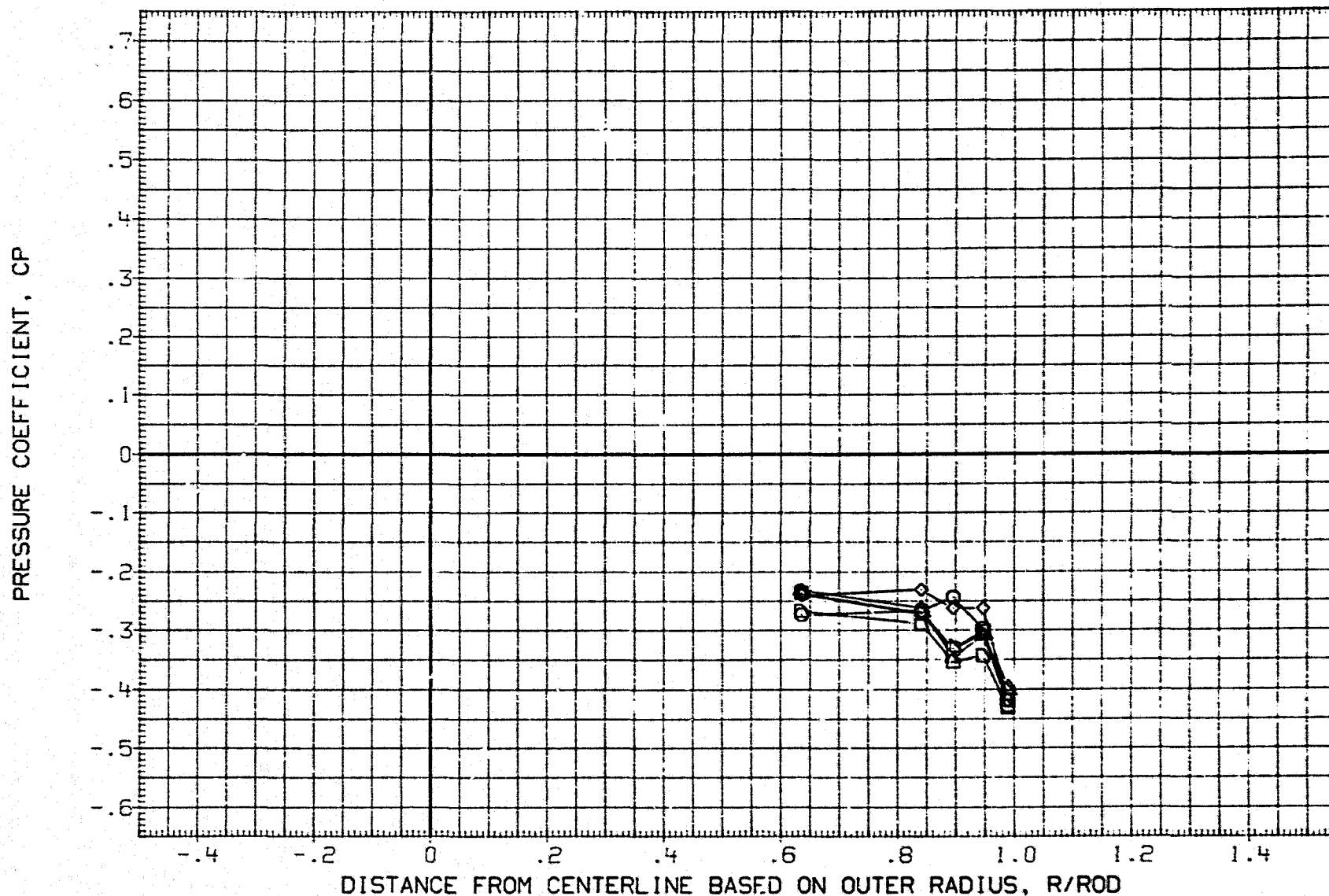


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = 180.000

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DATA SFT	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	ET BASE	.000	.000	1.400 4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	ET BASE	.000	.000	1.400 4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N)	ET BASE	.000	.000	1.400 4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+)	ET BASE	.000	.000	1.400 4.250
(AE4H09)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	ET BASE	.000	.000	1.400 4.250
(AE4H04)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	ET BASE	.000	.000	1.400 4.250

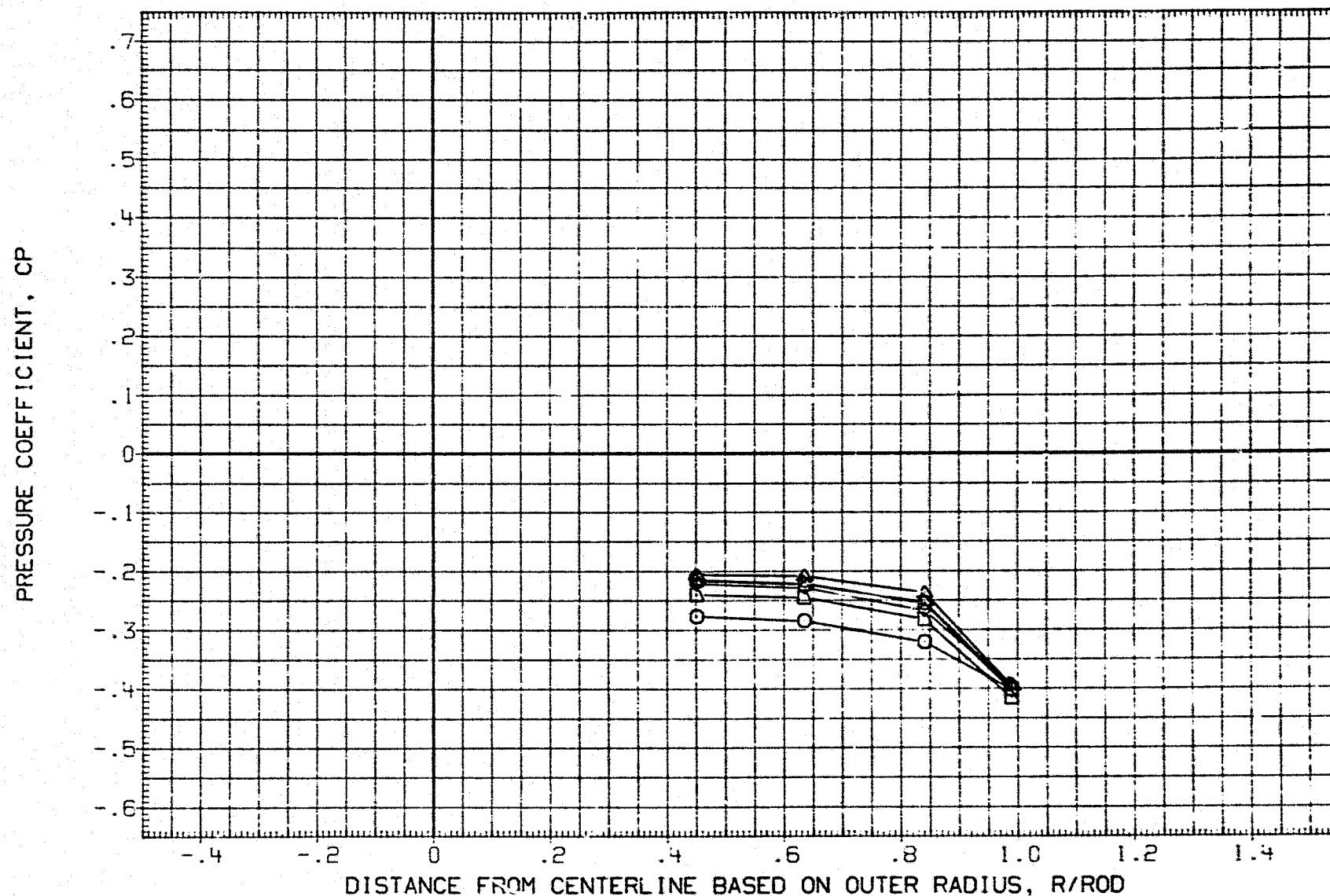


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

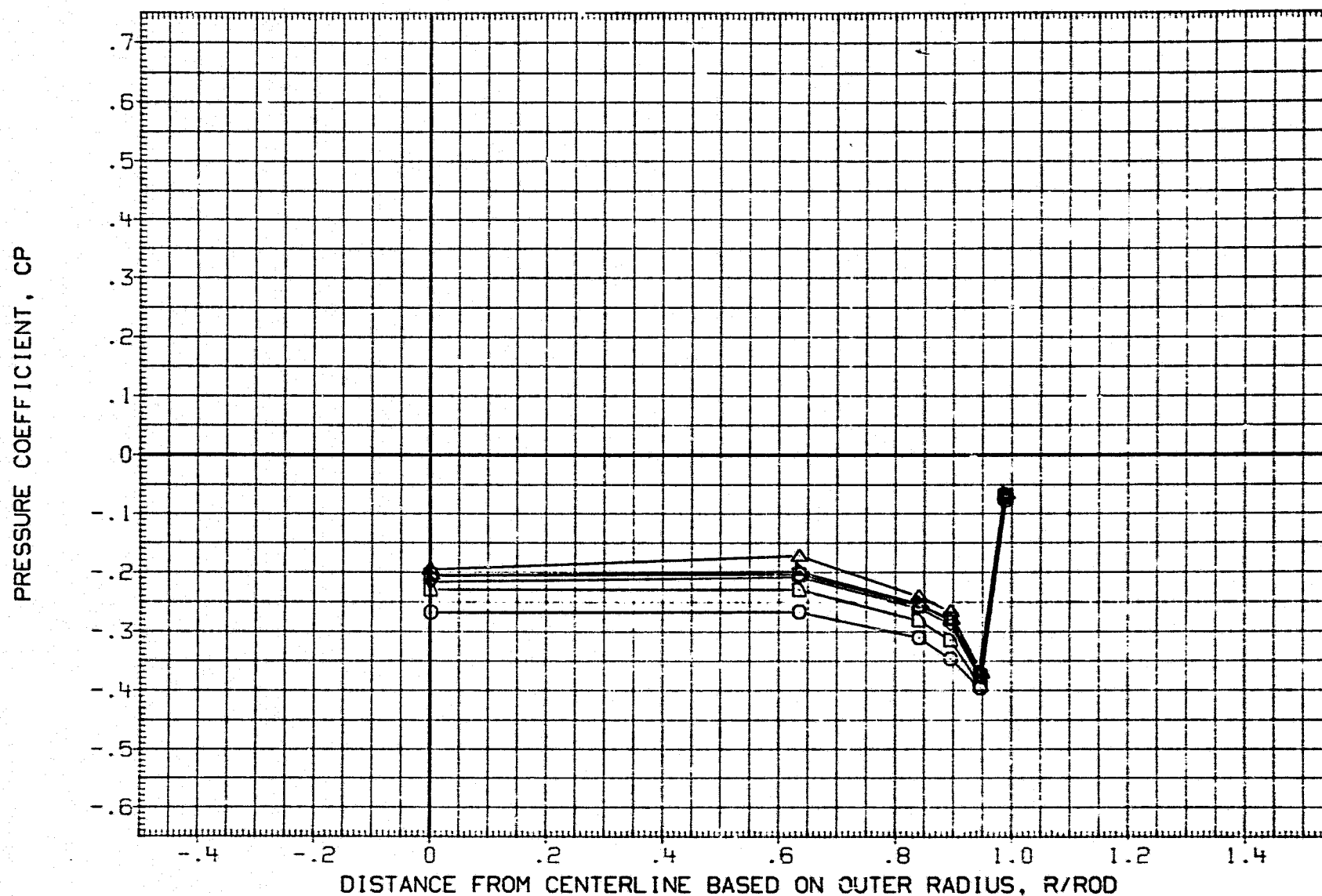


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

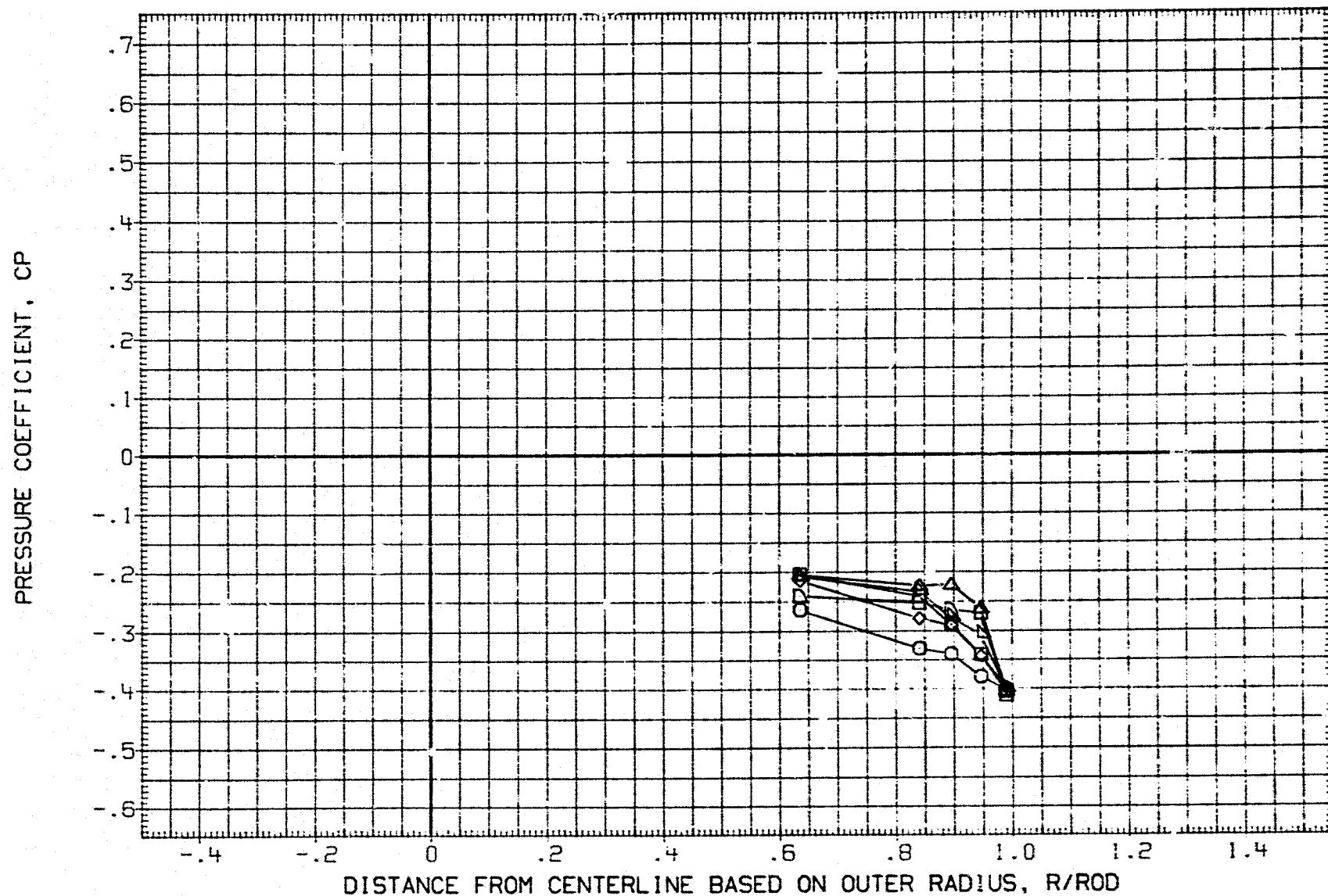


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = 90.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	□	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4H89)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4H84)	◊	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

PRESSURE COEFFICIENT, CP

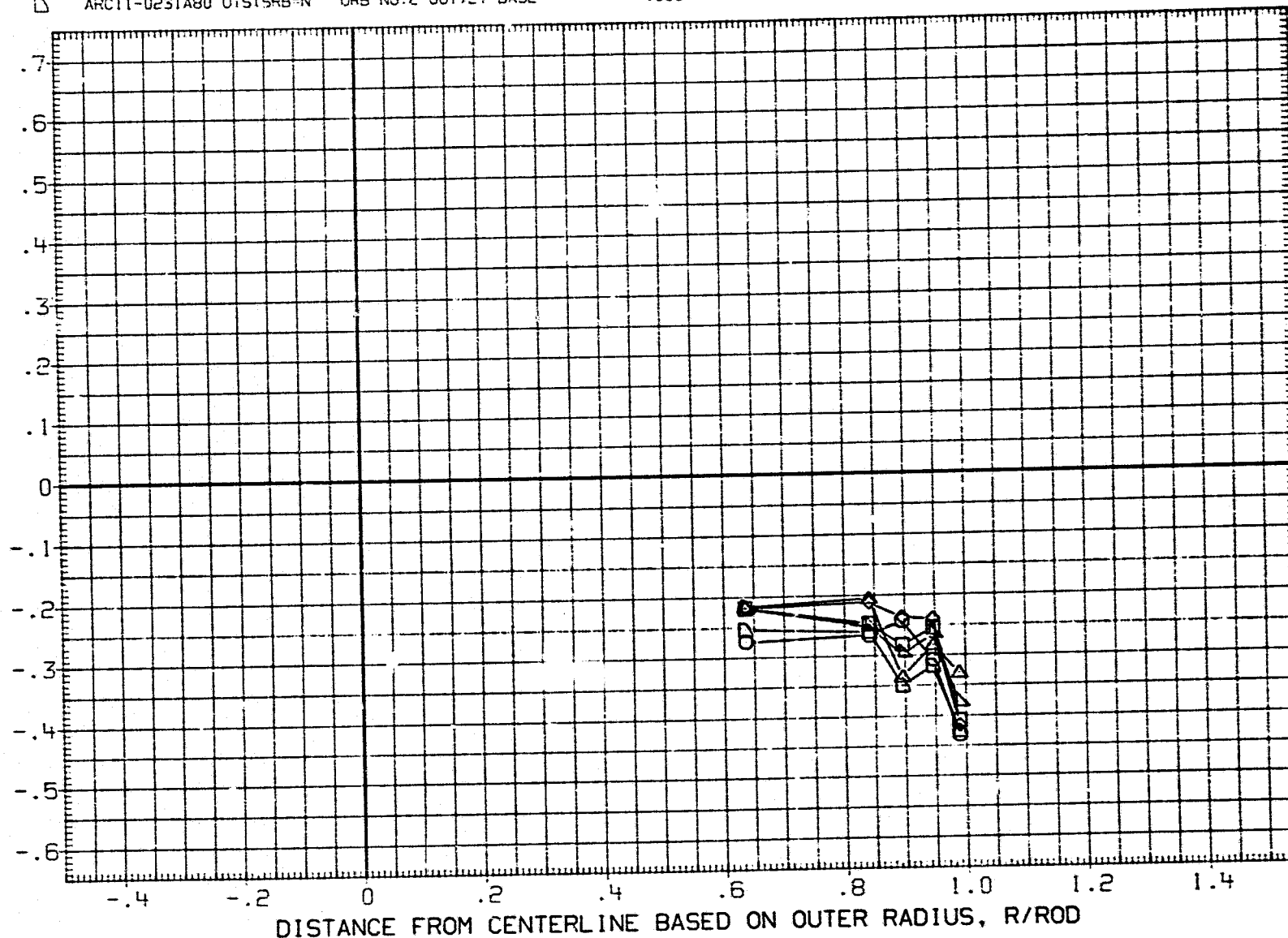


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(AE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(AE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(AE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(AE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(AE4HB4)	◊	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

PRESSURE COEFFICIENT, CP

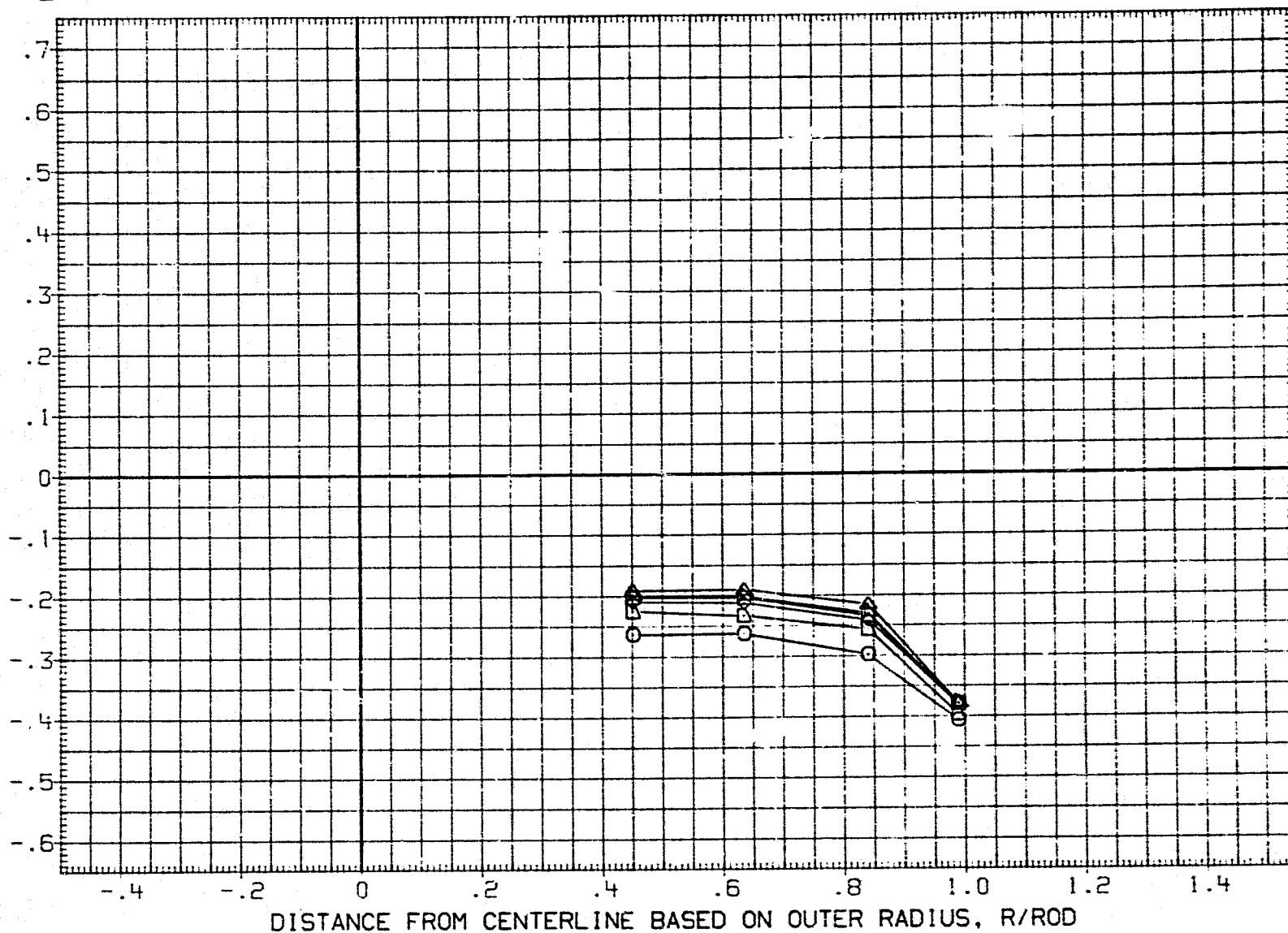


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = 4.000 BETA = .000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-18	ELV-08	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) L. BASE	.000	.000	1.400	4.250
(BE4H24)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◊	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(BE4H09)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.400	4.250
(BE4H04)	□	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.400	4.250

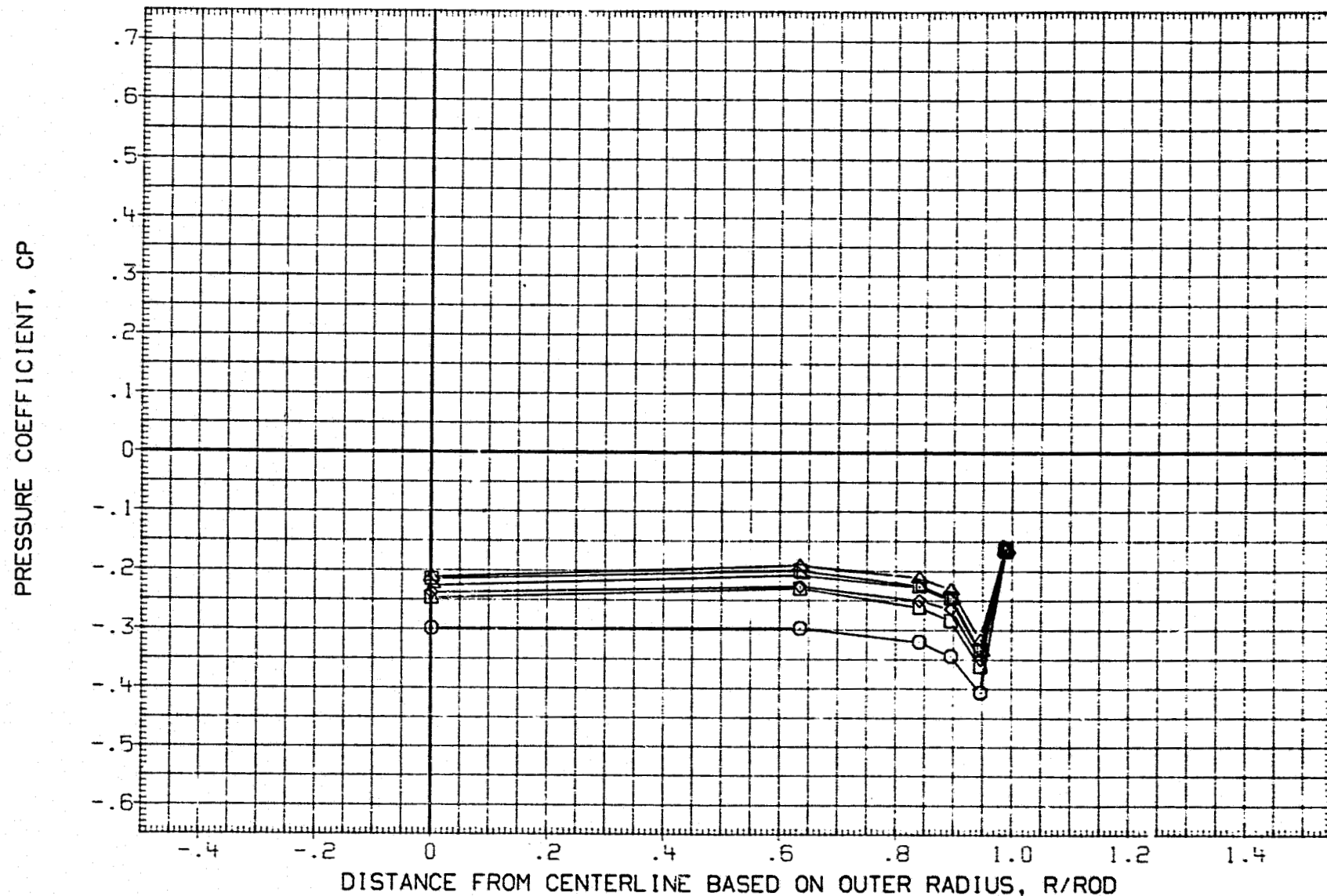


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H39)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.400	4.250
(BE4H34)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.400	4.250

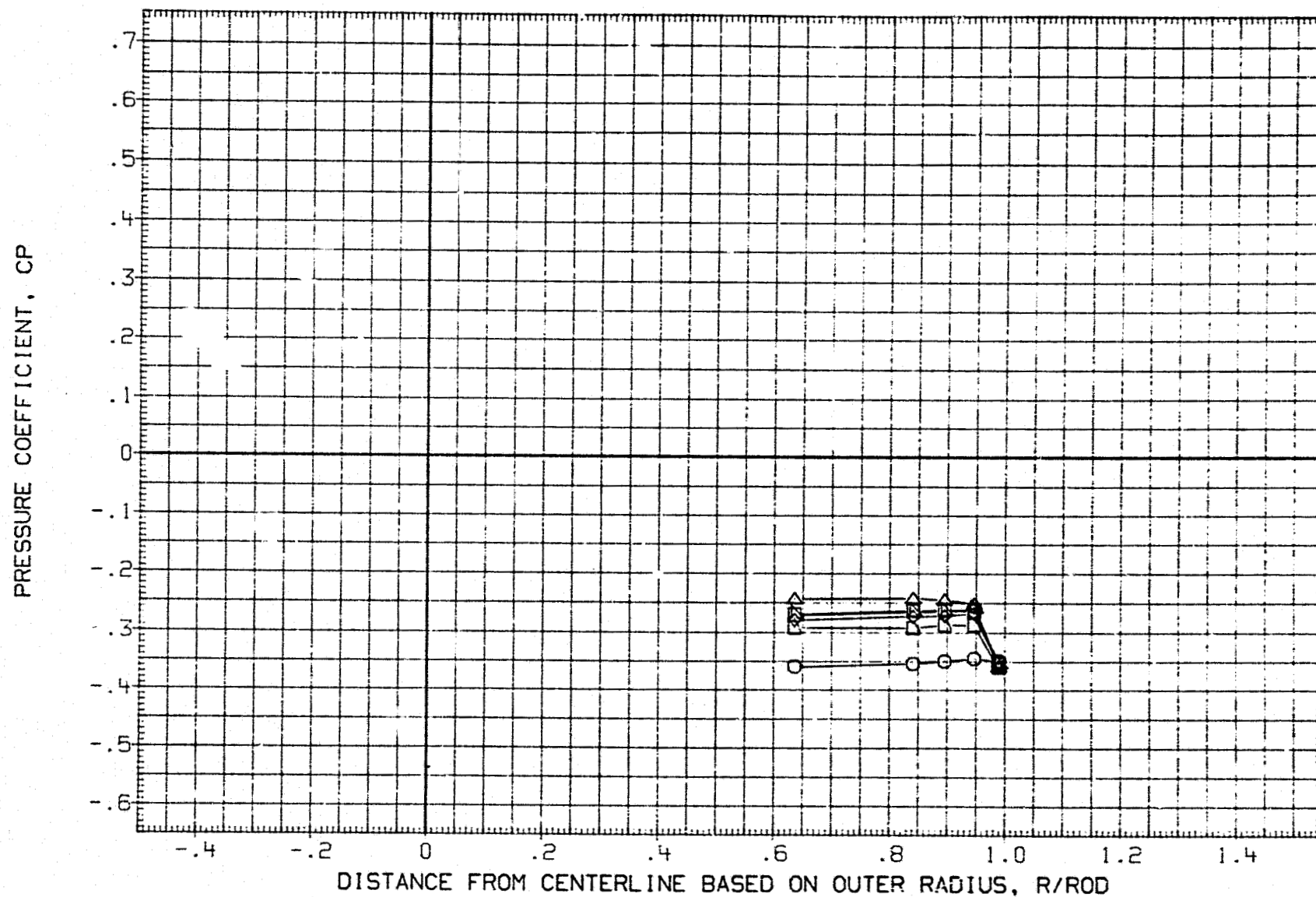


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-IB	ELV-OB	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	□	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(BE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(BE4HB4)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

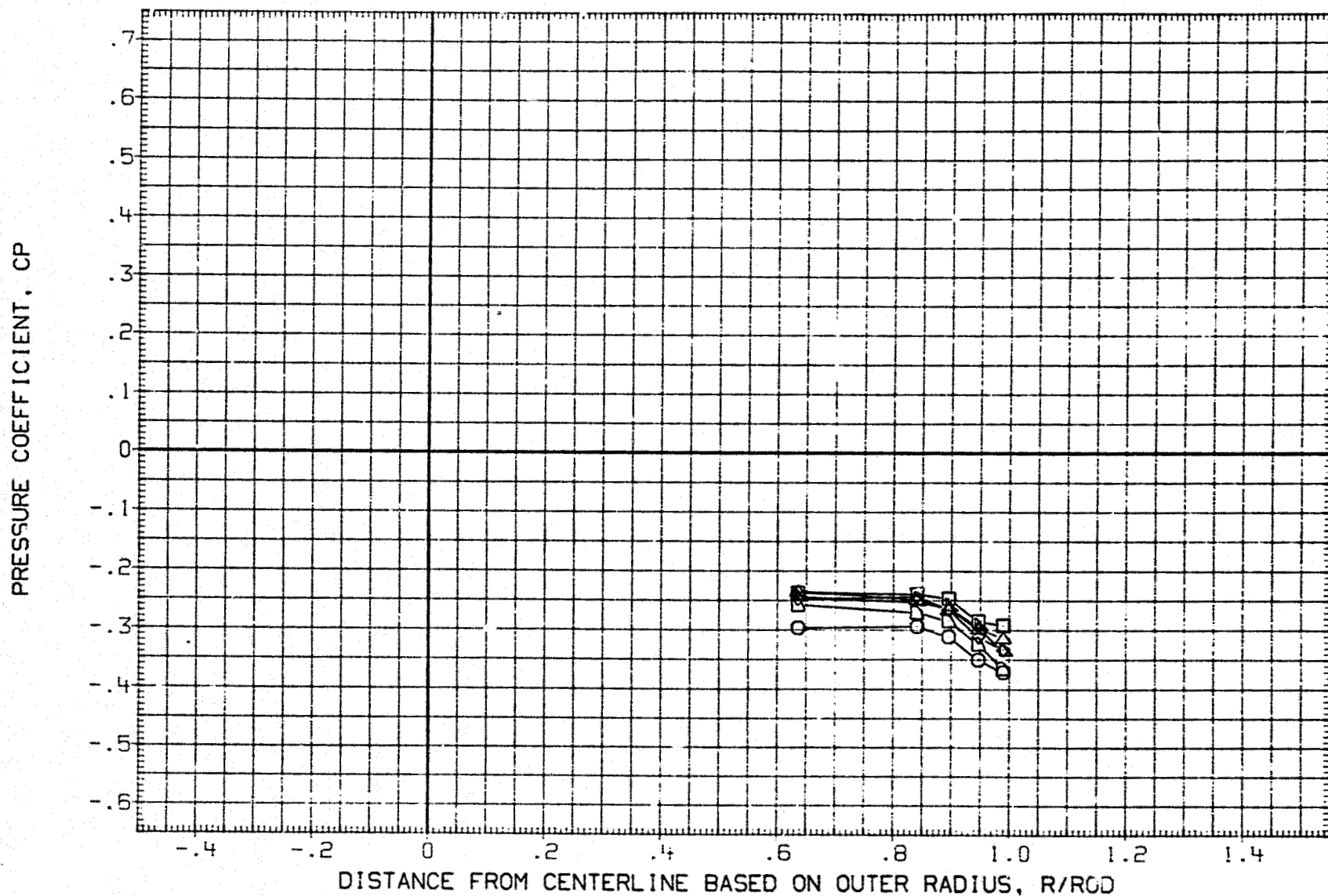


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-OB	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(BE4HB3)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(BE4HB4)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

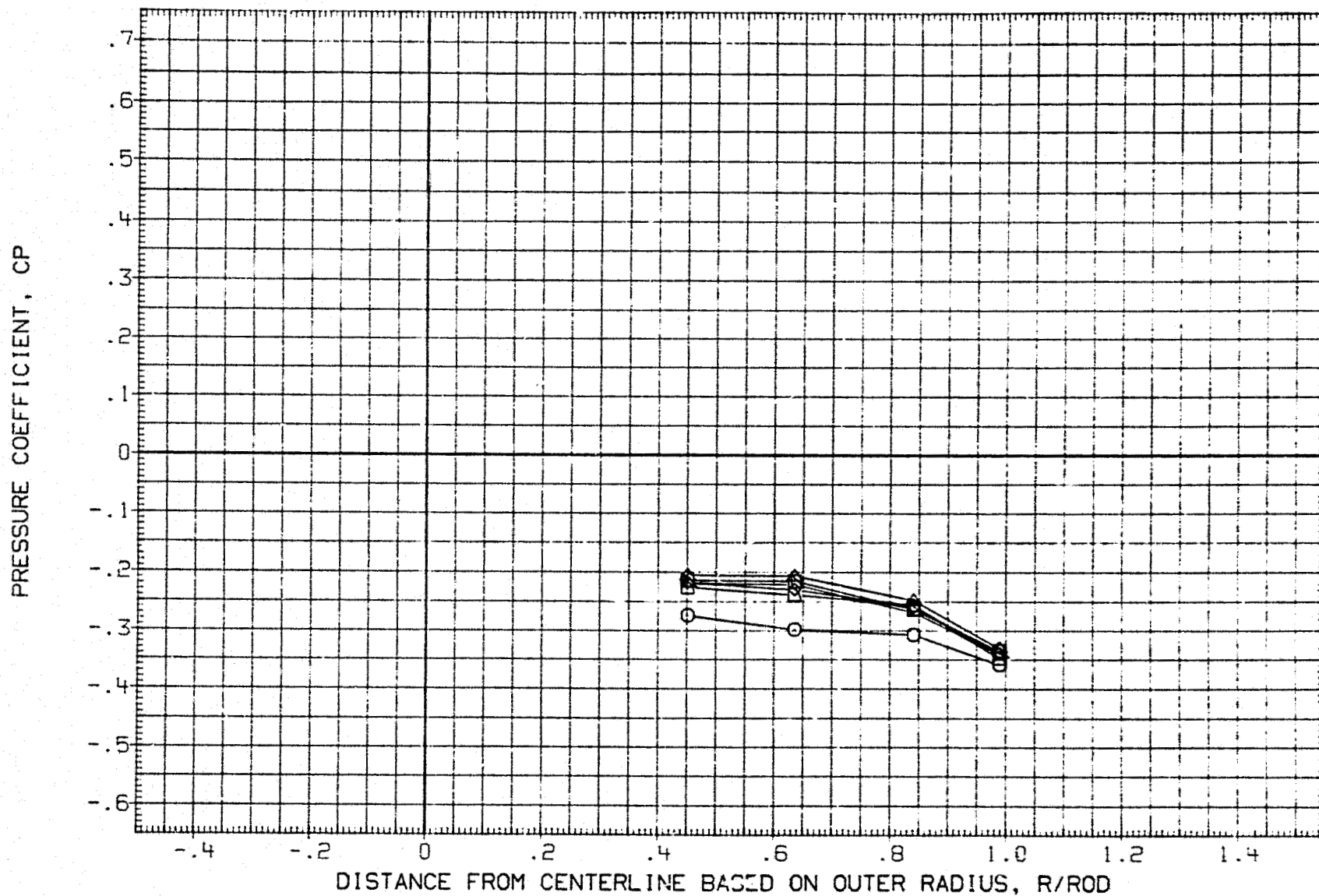


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = -4.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(BE4HB9)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.000	.000	1.400	4.250
(BE4HB4)	◻	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.000	.000	1.400	4.250

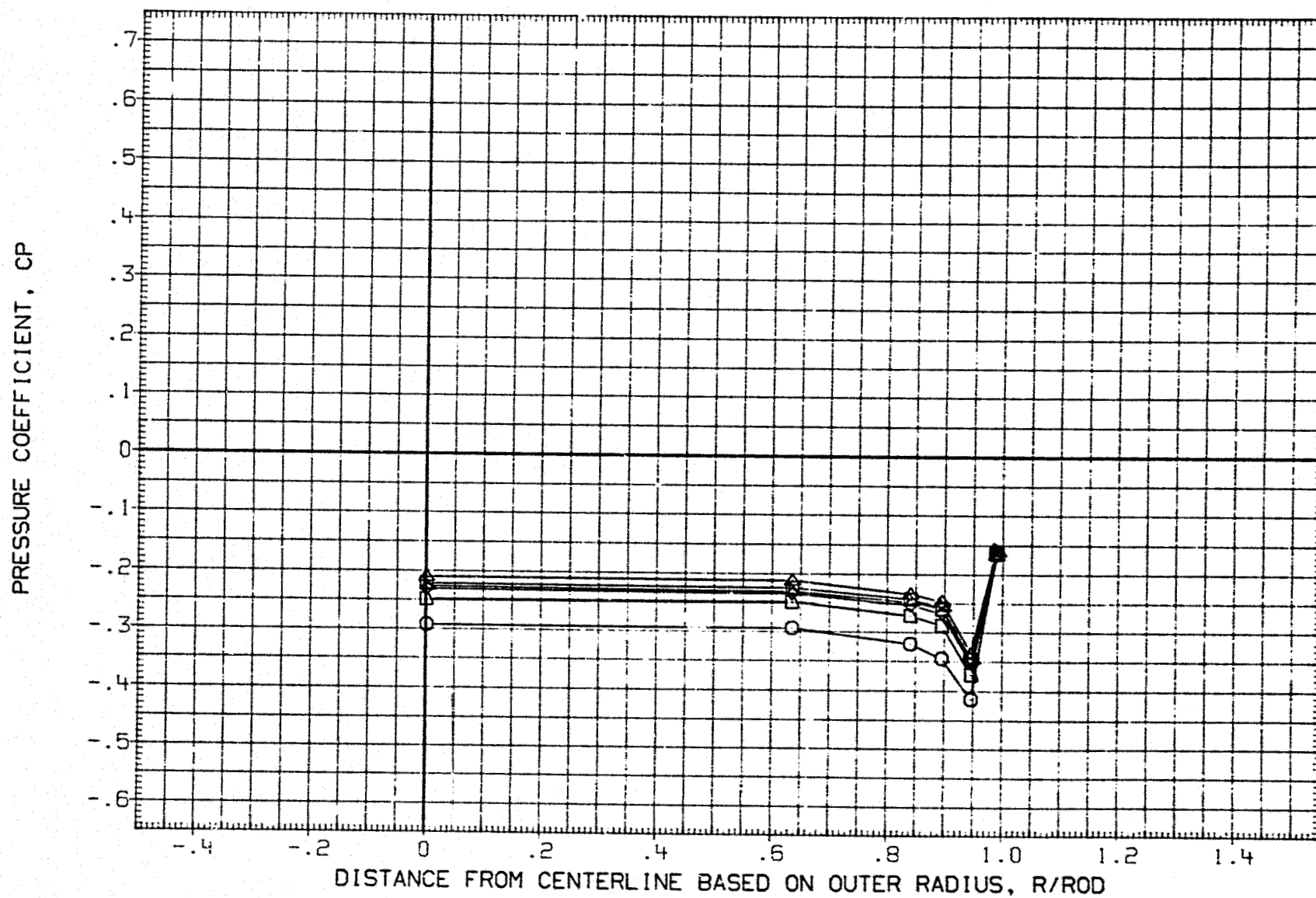


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	◇	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(BE4H99)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT) ET BASE	.300	.000	1.400	4.250
(BE4H84)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT) ET BASE	.300	.000	1.400	4.250

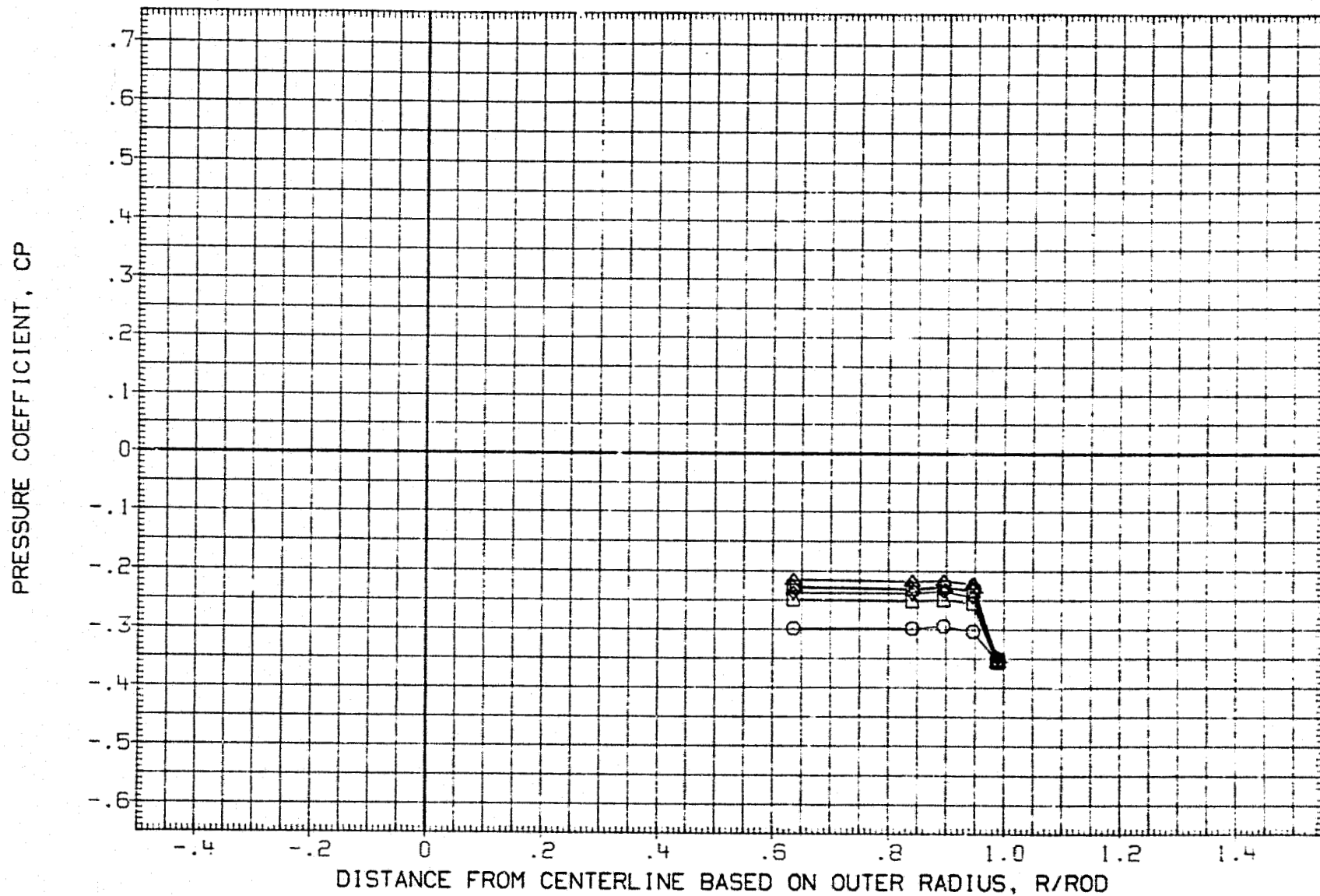


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = 90.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	□	ARC11-0231A80 OTS(SRB=N ORB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N OPB=N+) ET BASE	.000	.000	1.400	4.250
(BE4H89)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(BE4H84)	◻	ARC11-0231A80 OTS(CRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

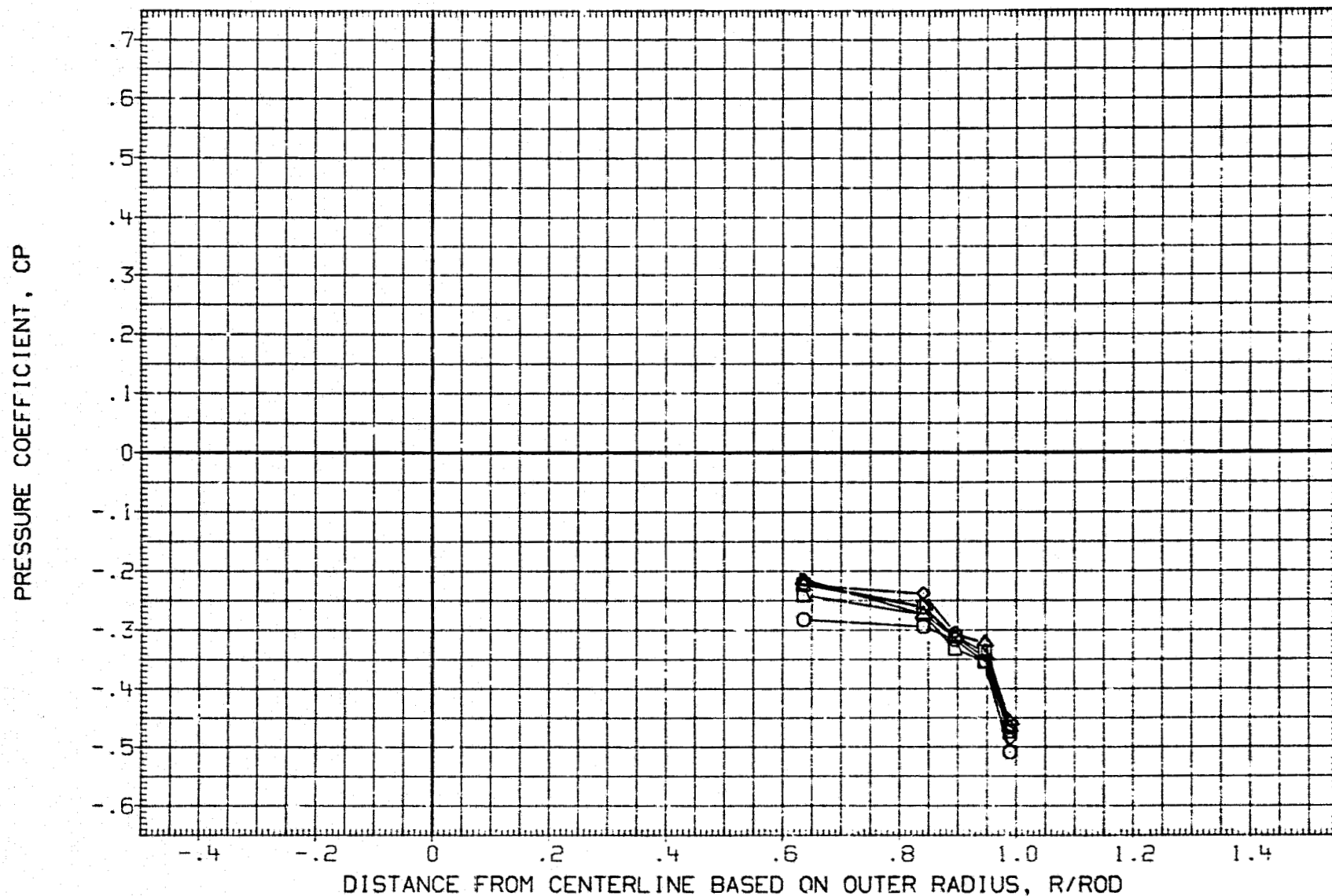


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = 180.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4H32)	○	ARC11-0231A80 OTS(SRB-OFF ORB=OFF) ET BASE	.000	.000	1.400	4.250
(BE4H24)	□	ARC11-0231A80 OTS(SRB=N CRB=N) ET BASE	.000	.000	1.400	4.250
(BE4H19)	◇	ARC11-0231A80 OTS(SRB=N ORB=N-) ET BASE	.000	.000	1.400	4.250
(BE4H15)	△	ARC11-0231A80 OTS(SRB=N ORB=N+) ET BASE	.000	.000	1.400	4.250
(BE4H09)	▽	ARC11-0231A80 OTS(SRB=N ORB NO.1 OUT)ET BASE	.000	.000	1.400	4.250
(BE4H04)	◇	ARC11-0231A80 OTS(SRB=N ORB NO.2 OUT)ET BASE	.000	.000	1.400	4.250

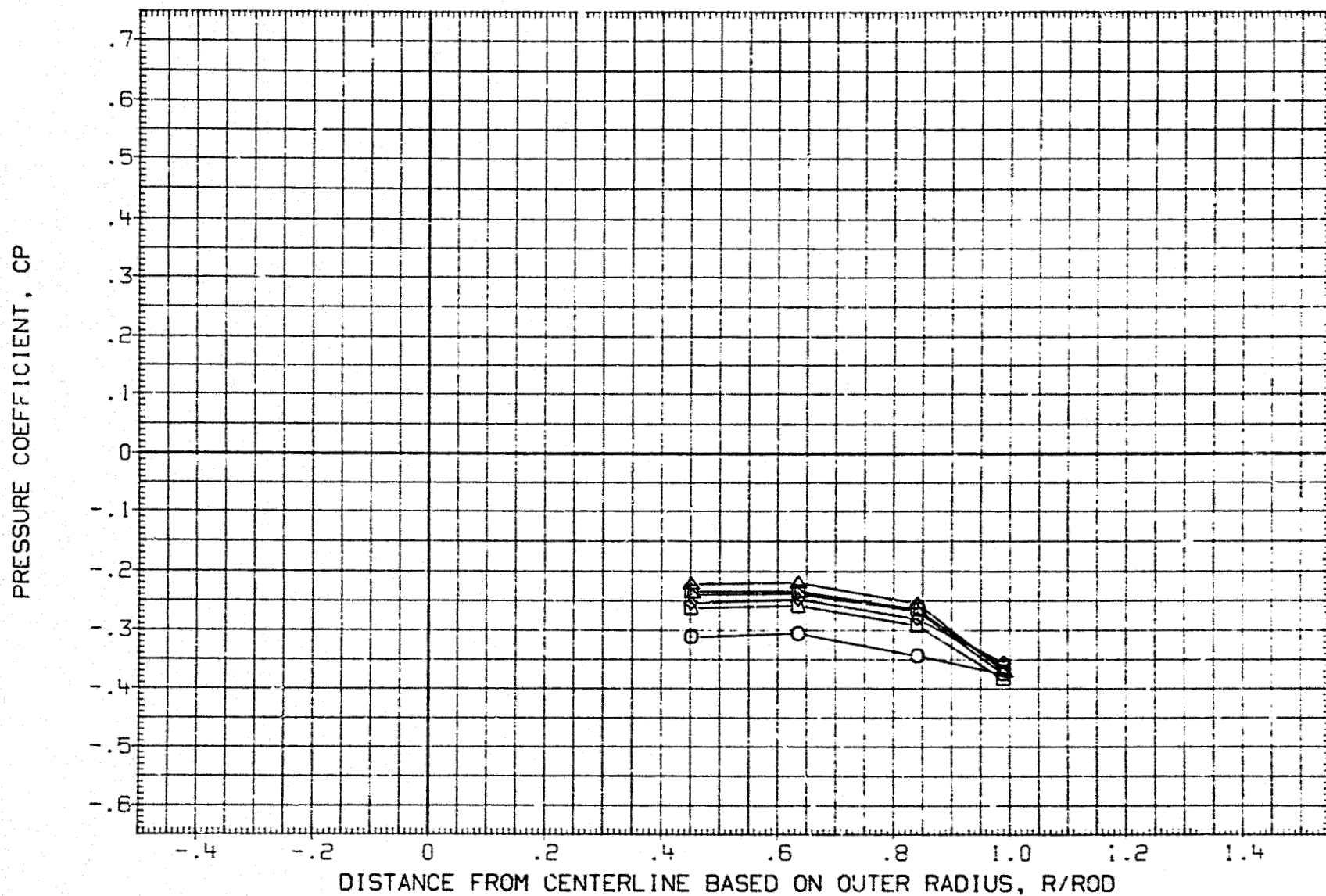


FIG. 134 PLUME EFFECTS ON ET BASE PRESSURE COEFFICIENT, MACH=1.4

ALPHA = .000 BETA = 4.000 PHI = 270.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(AE4128)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.600	3.400
(AE4120)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(AE4106)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(AE4101)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.600	3.400

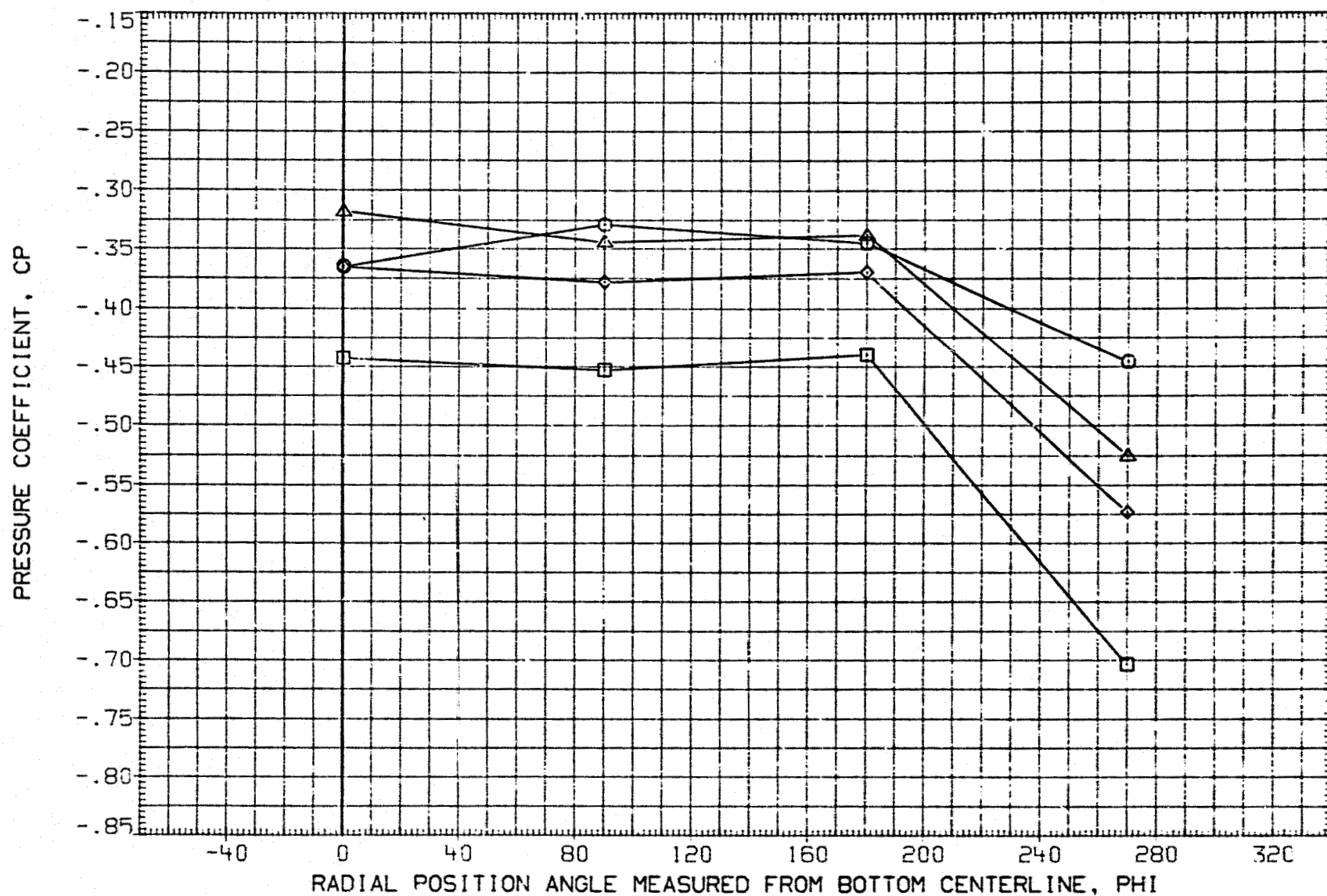


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(AE4128)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.600	3.400
(AE4120)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(AE4106)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(AE4101)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.600	3.400

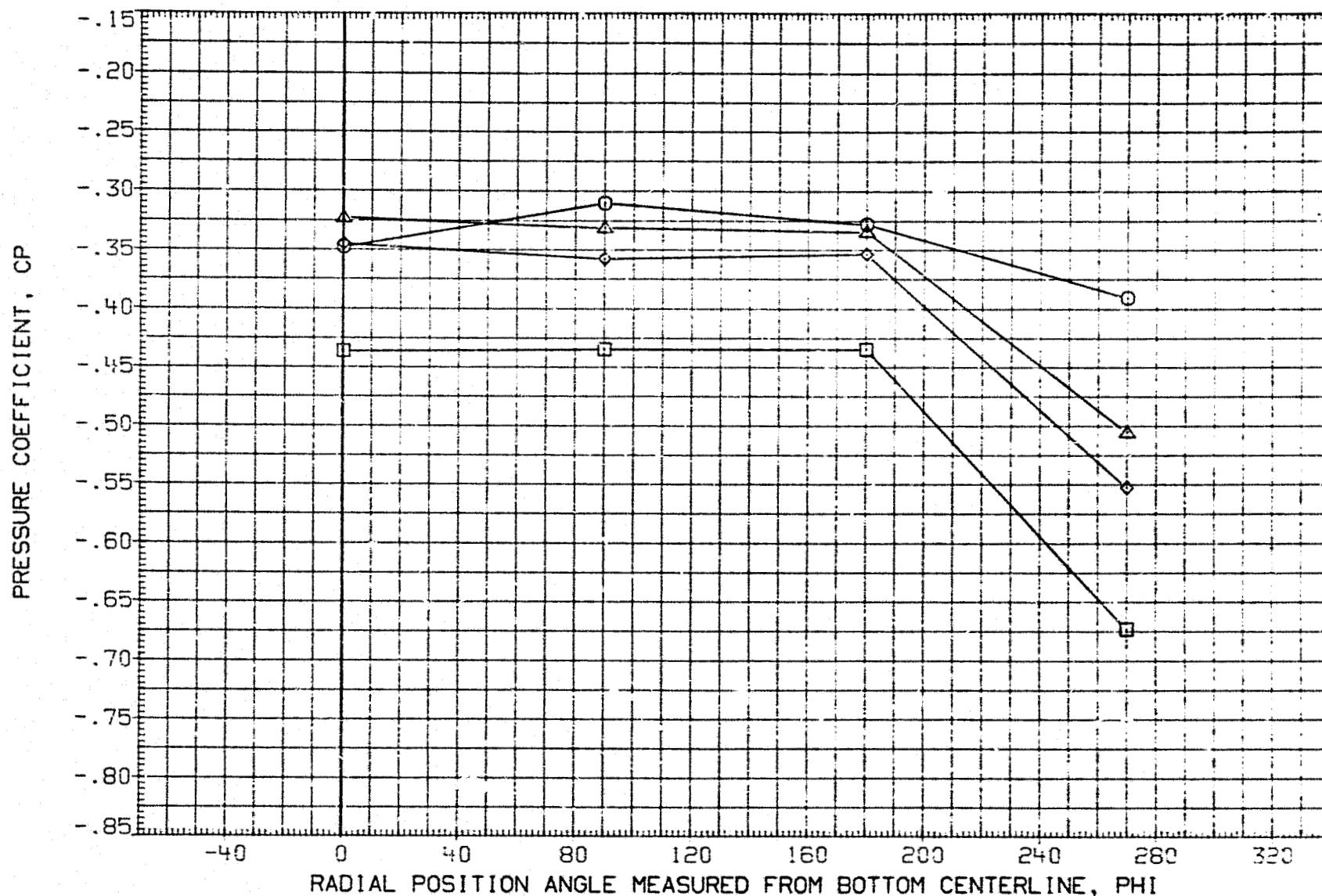


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	RN/L
(AE4128)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.600	3.400
(AE4120)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SPB SKIRT	.000	.000	.600	3.400
(AE4106)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(AE4101)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.600	3.400

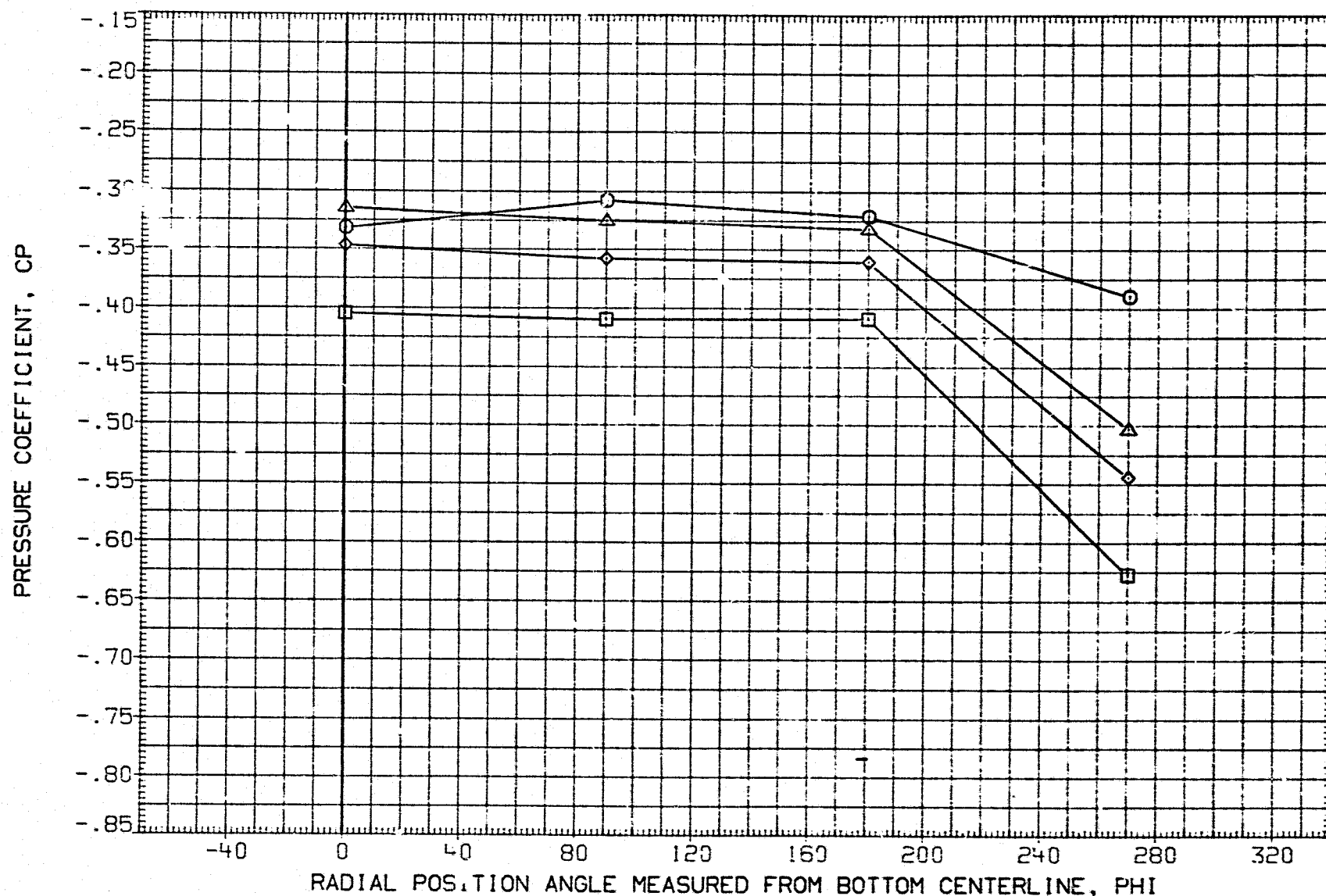


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = 4.000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-IB	ELV-OB	MACH	RN/L
(BE4128)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.600	3.400
(BE4120)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(BE4106)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(BE4101)	△	APC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.600	3.400

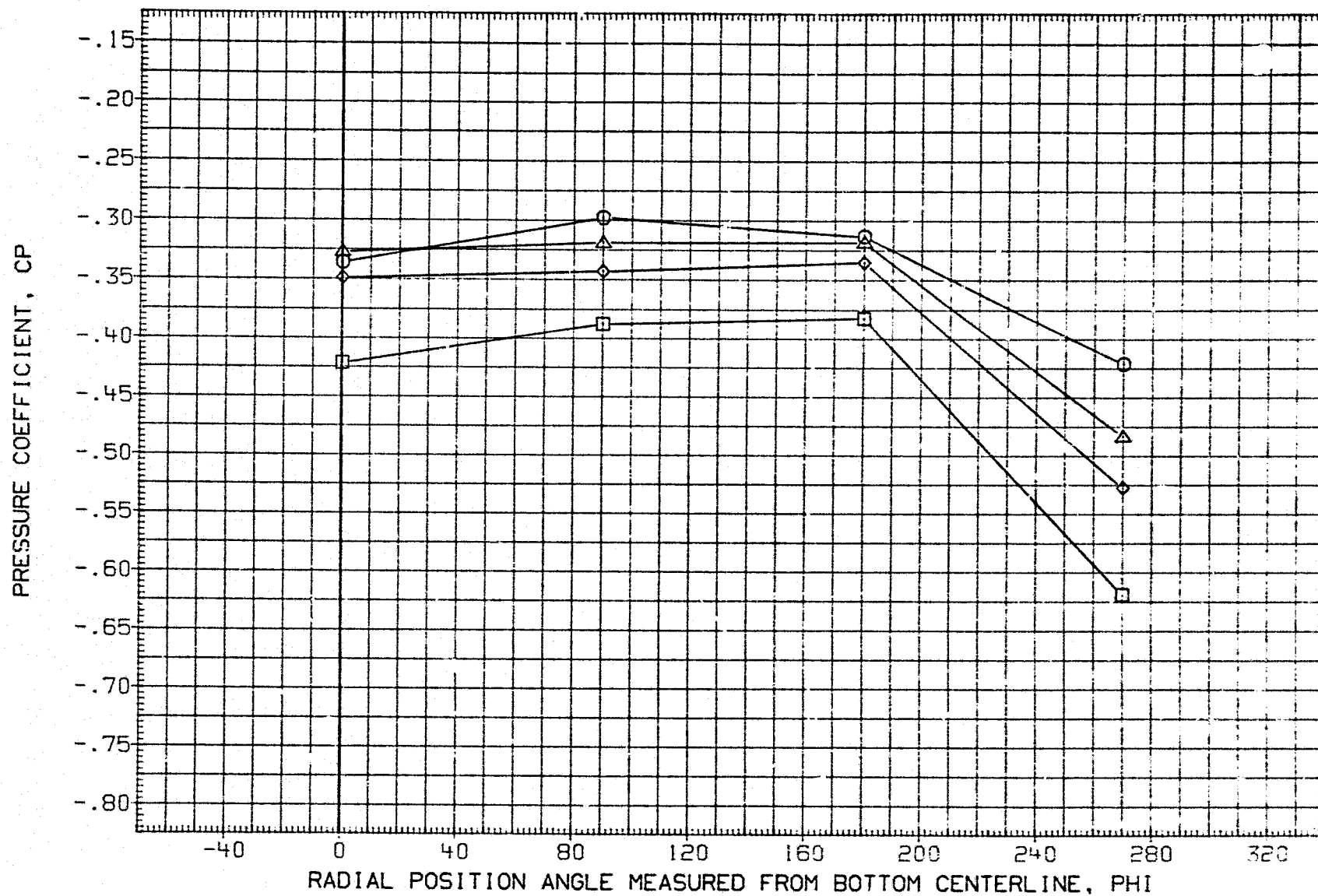


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = -4.000 XB/LB = .950

DATA SET SYMBOL CONFIGURATION DESCRIPTION ELV-IB ELV-OB MACH RN/L

(BE4128)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.600	3.400
(BE4120)	□	ARC11-0231A80 OTS(SRB=+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(BE4106)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(BE4101)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.600	3.400

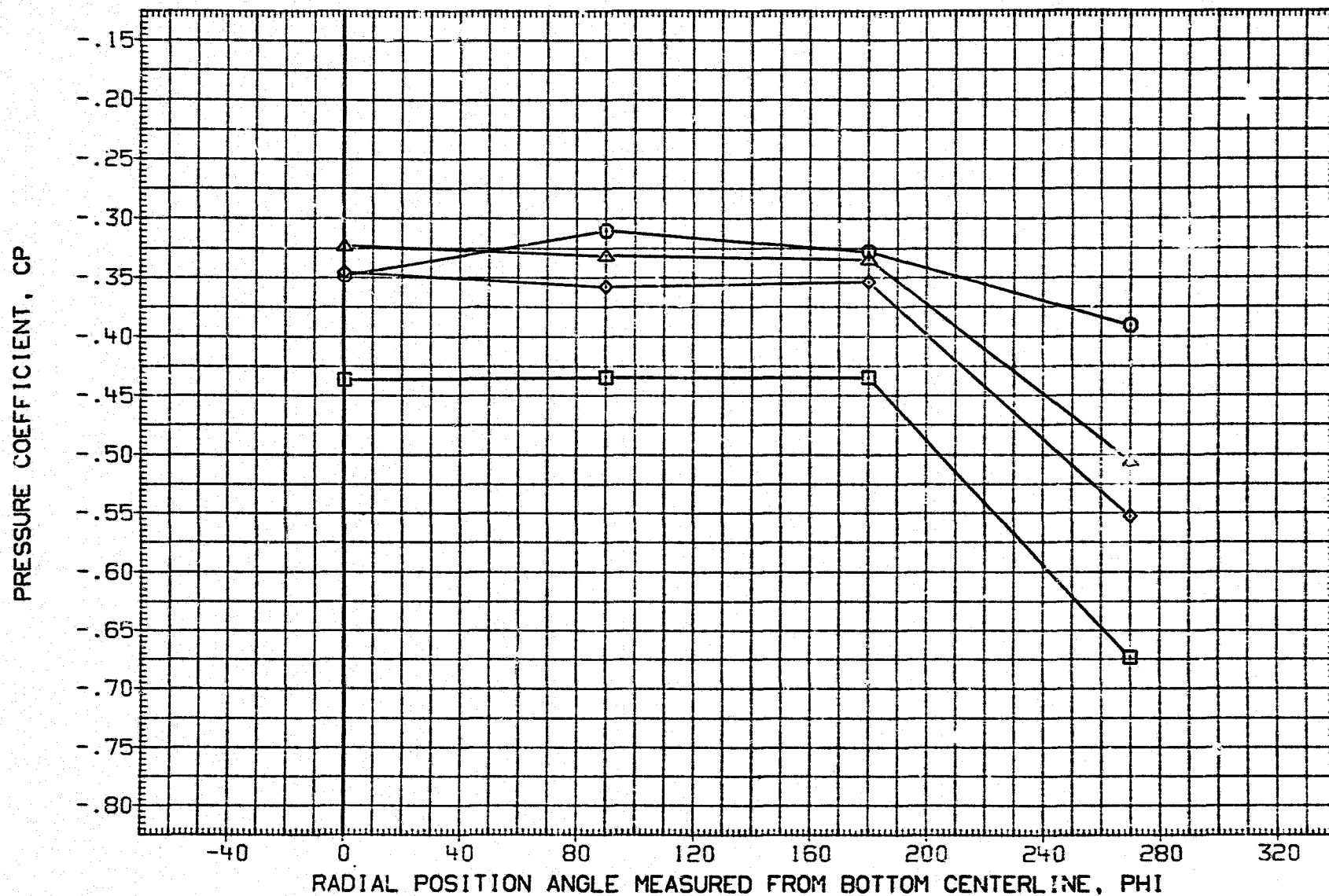


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = .000 XB/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	RN/L
(BE4128)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.600	3.400
(BE4120)	□	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(BE4106)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.600	3.400
(BE4101)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.600	3.400

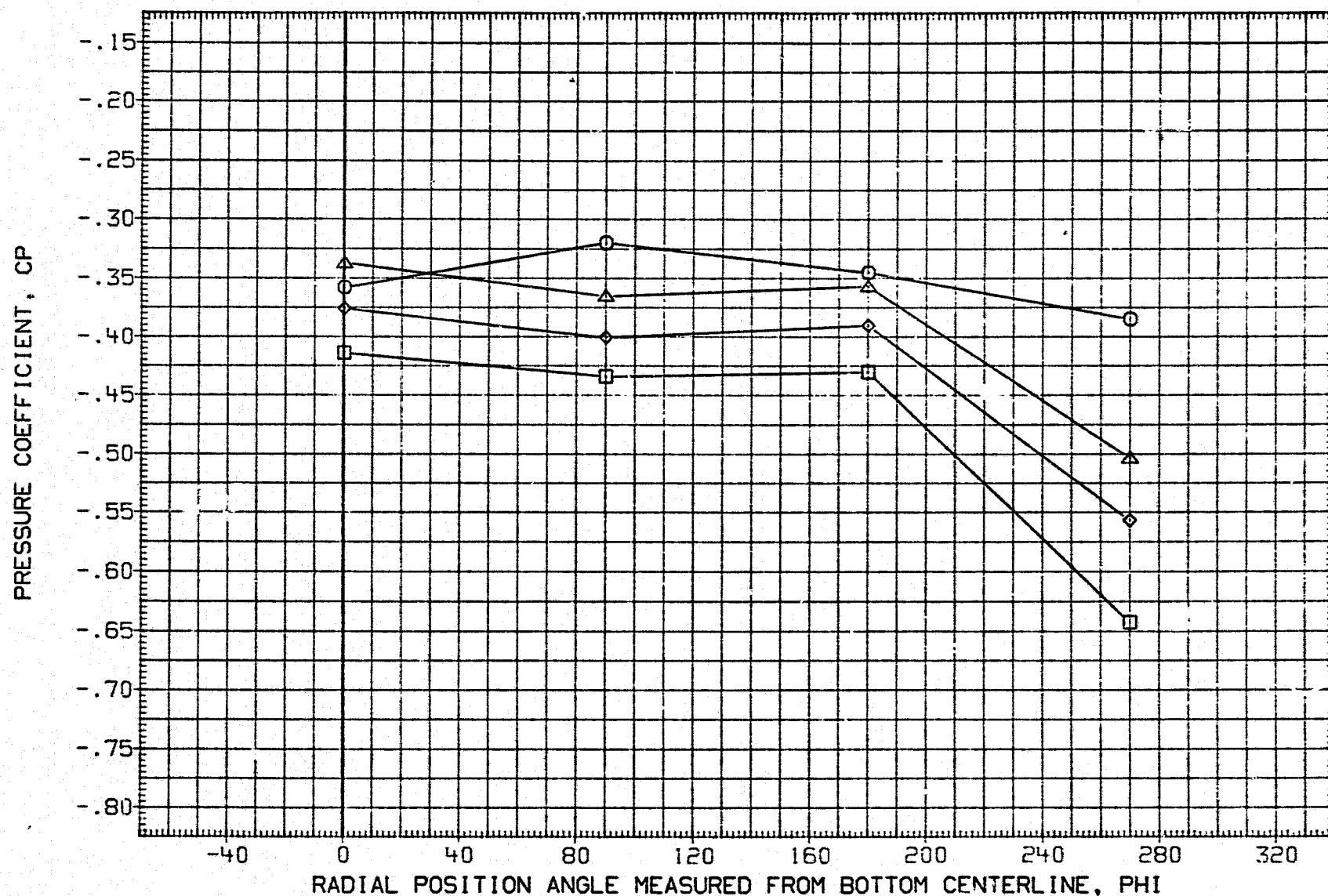


FIG. 135 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.6

ALPHA = .000 BETA = 4.000 XB/LE = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(AE4129)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.900	4.250
(AE4121)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(AE4107)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(AE4102)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.900	4.250

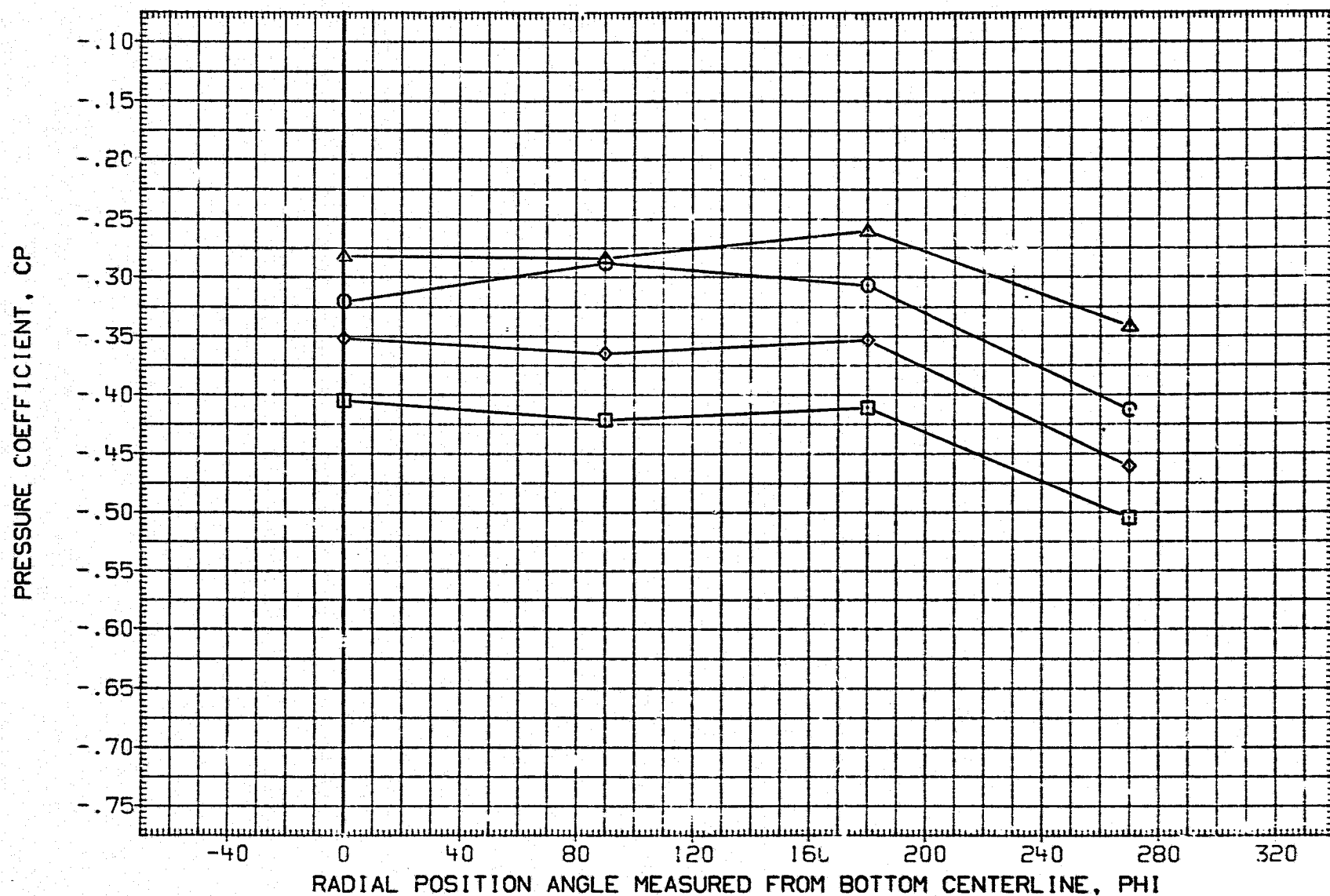


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = -4.000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-1B	ELV-0B	MACH	RN/L
(AE4129)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.900	4.250
(AE4121)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(AE4107)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(AE4102)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.900	4.250

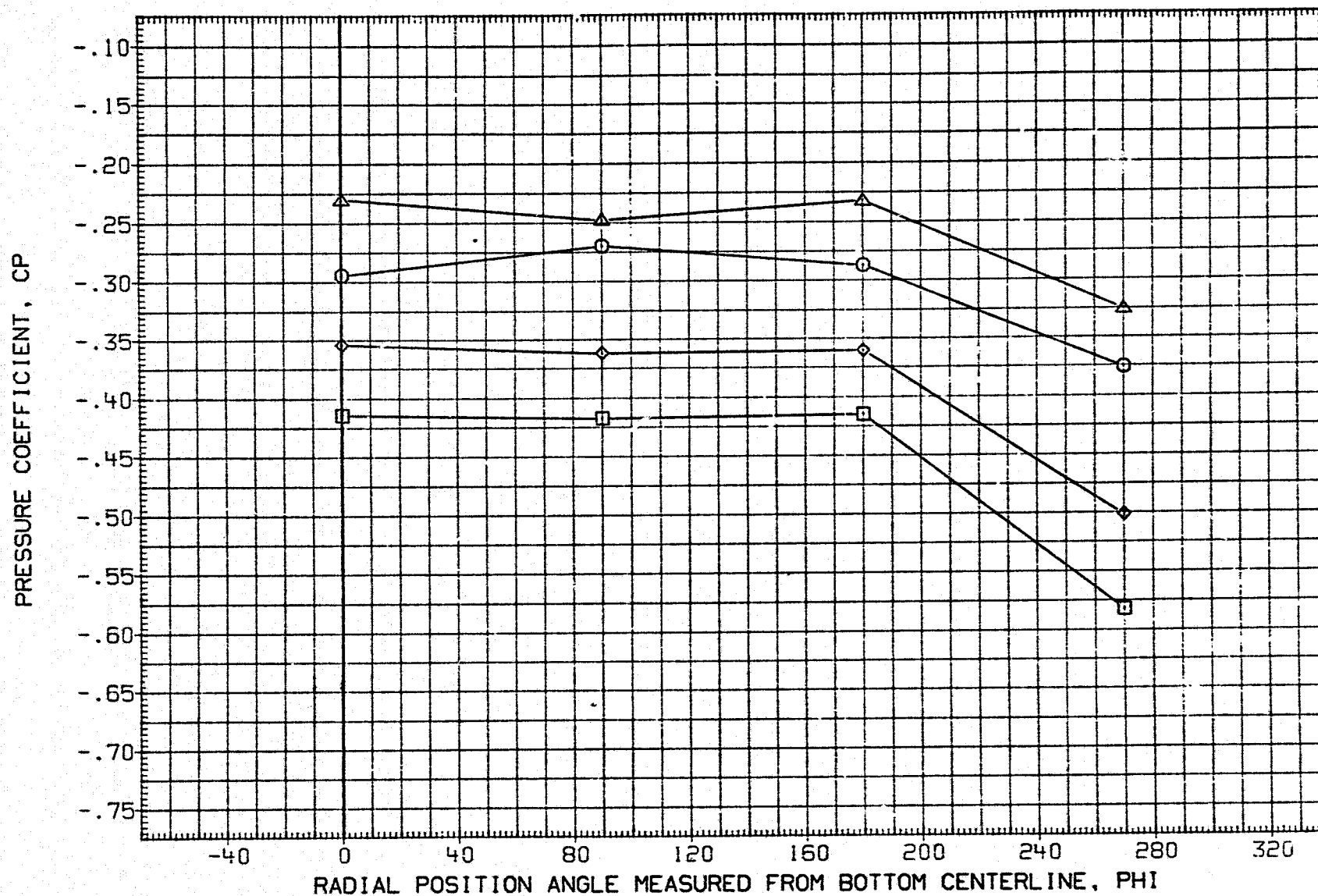


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-1B	ELV-0B	MACH	RN/L
(AE4129)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.900	4.250
(AE4121)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(AE4107)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(AE4102)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.900	4.250

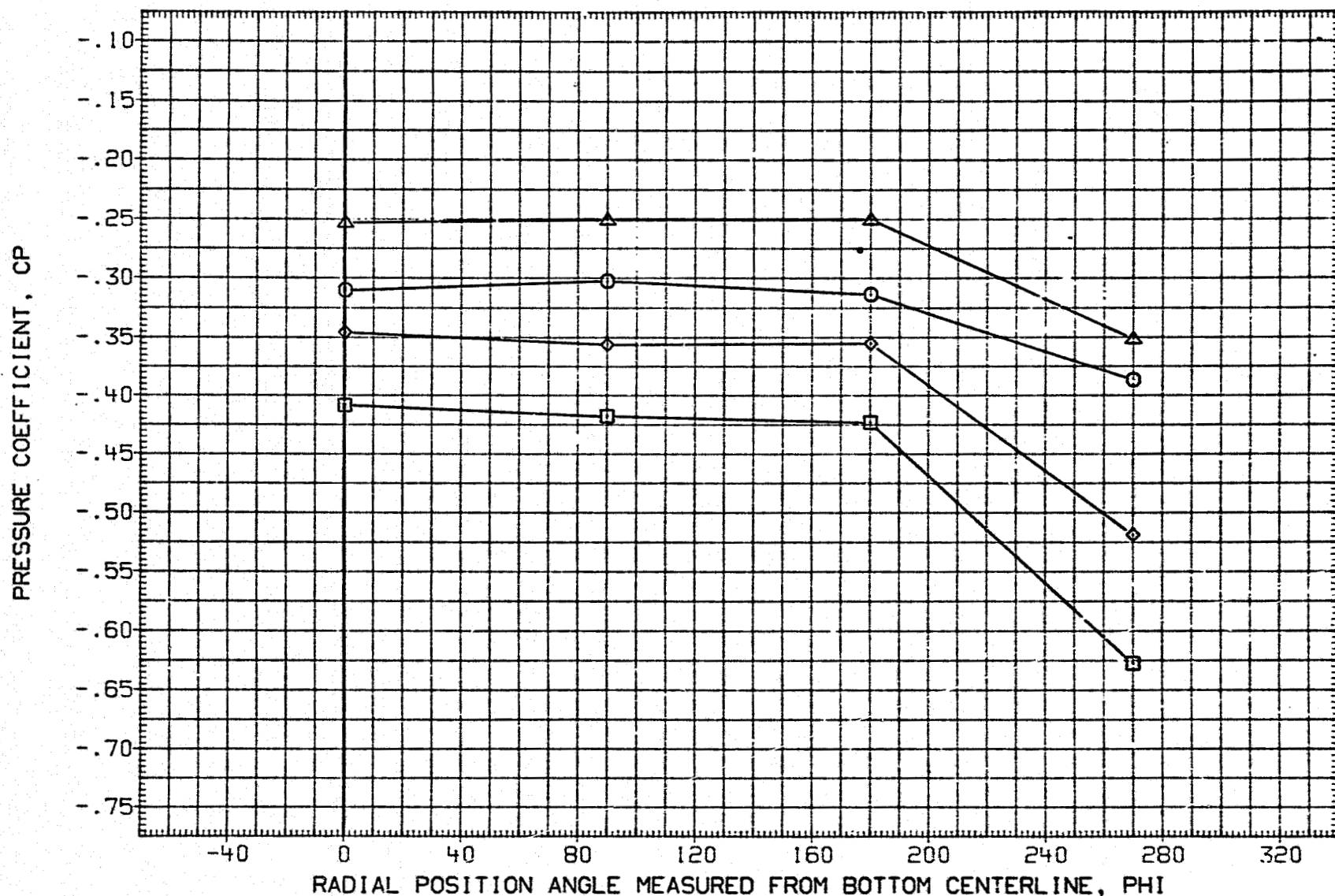


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = 4.000 BETA = .000 XB/LE = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(BE4129)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.900	4.250
(BE4121)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(BE4107)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(BE4102)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.900	4.250

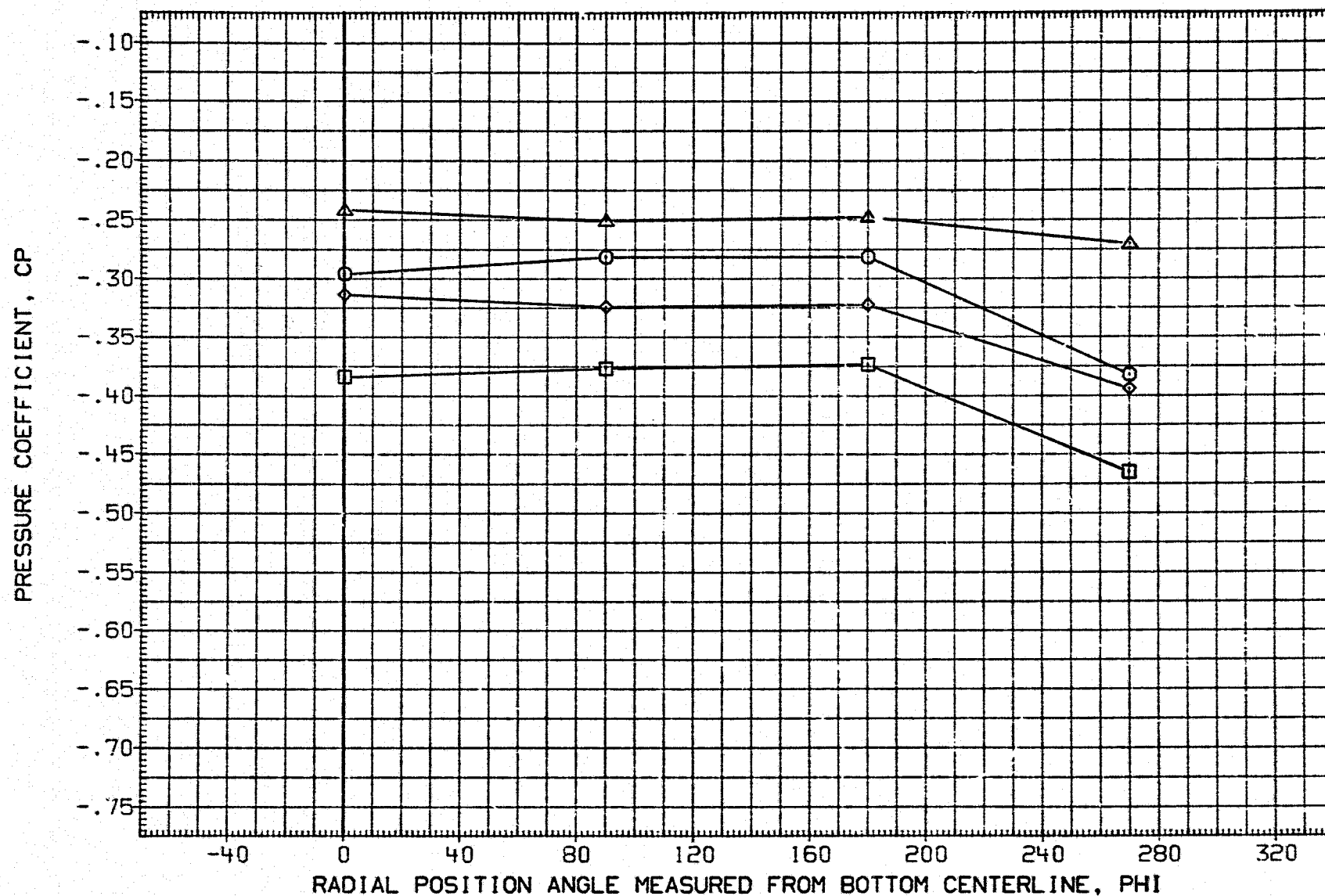


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = -4.000 XB/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(BE4129)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.900	4.250
(BE4121)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(BE4107)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(BE4102)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.900	4.250

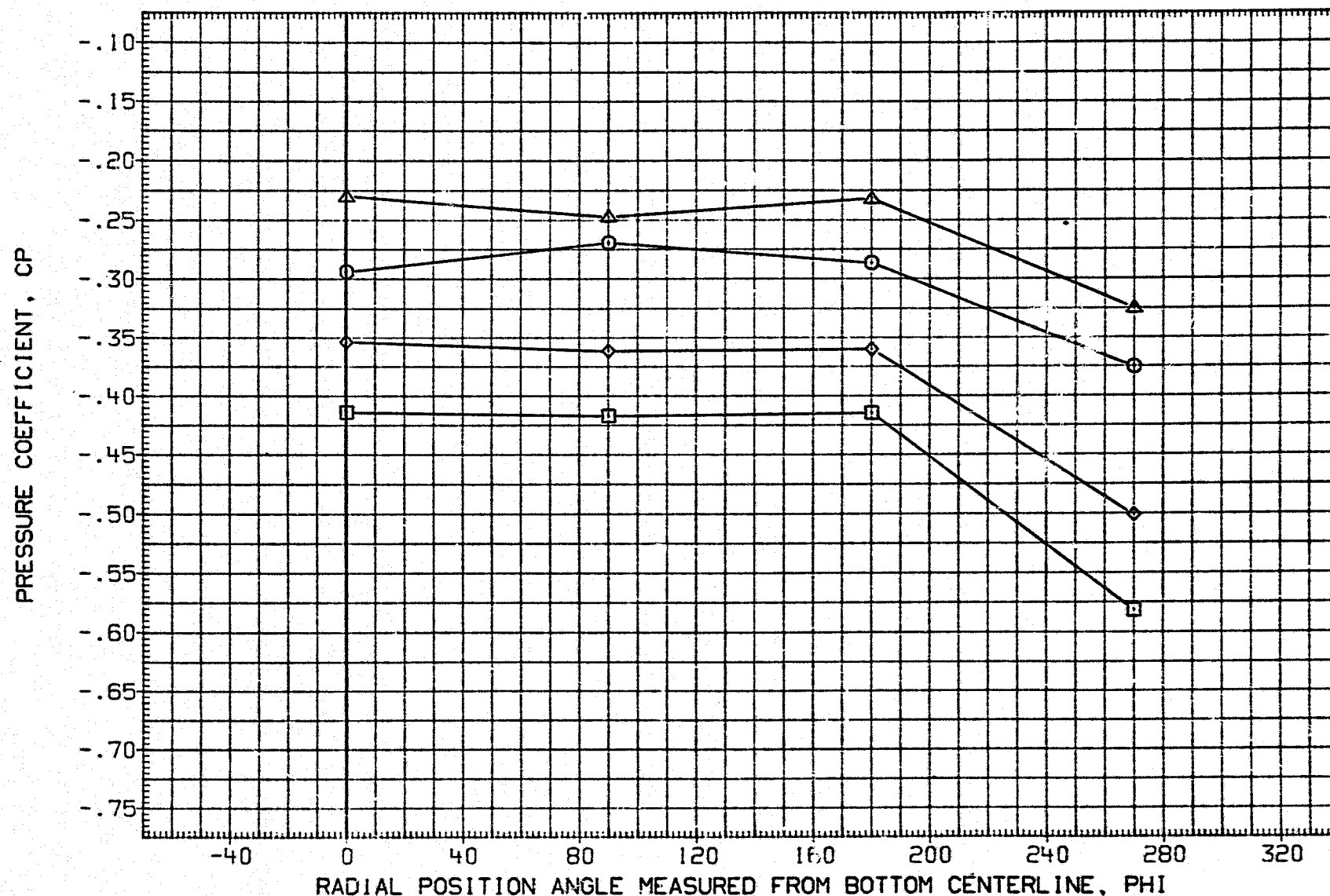


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(BE4129)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	.900	4.250
(BE4121)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(BE4107)	◇	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	.900	4.250
(BE4102)	△	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	.900	4.250

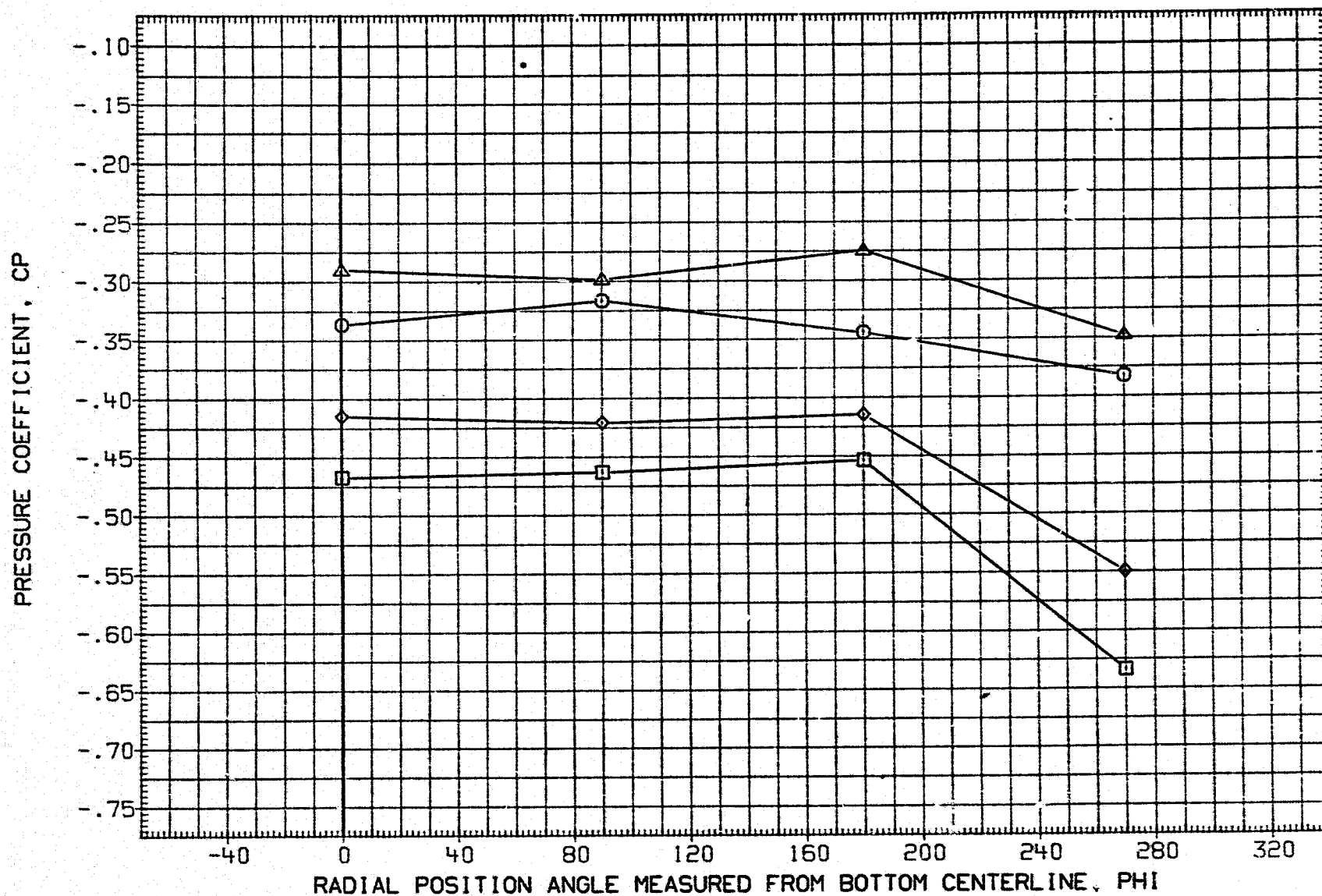


FIG. 136 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=0.9

ALPHA = .000 BETA = 4.000 XE/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-18	ELV-06	MACH	RN/L
(AE4130)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.100	4.250
(AE4122)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4125)	◇	ARC11-0231A80 OTS(SRB=N- ORB=)	SRB SKIRT	.000	.000	1.100	4.250
(AE4108)	△	ARC11-0231A80 OTS(SRB=N+ ORB=)	SRB SKIRT	.000	.000	1.100	4.250
(AE4103)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=)	SRB SKIRT	.000	.000	1.100	4.250

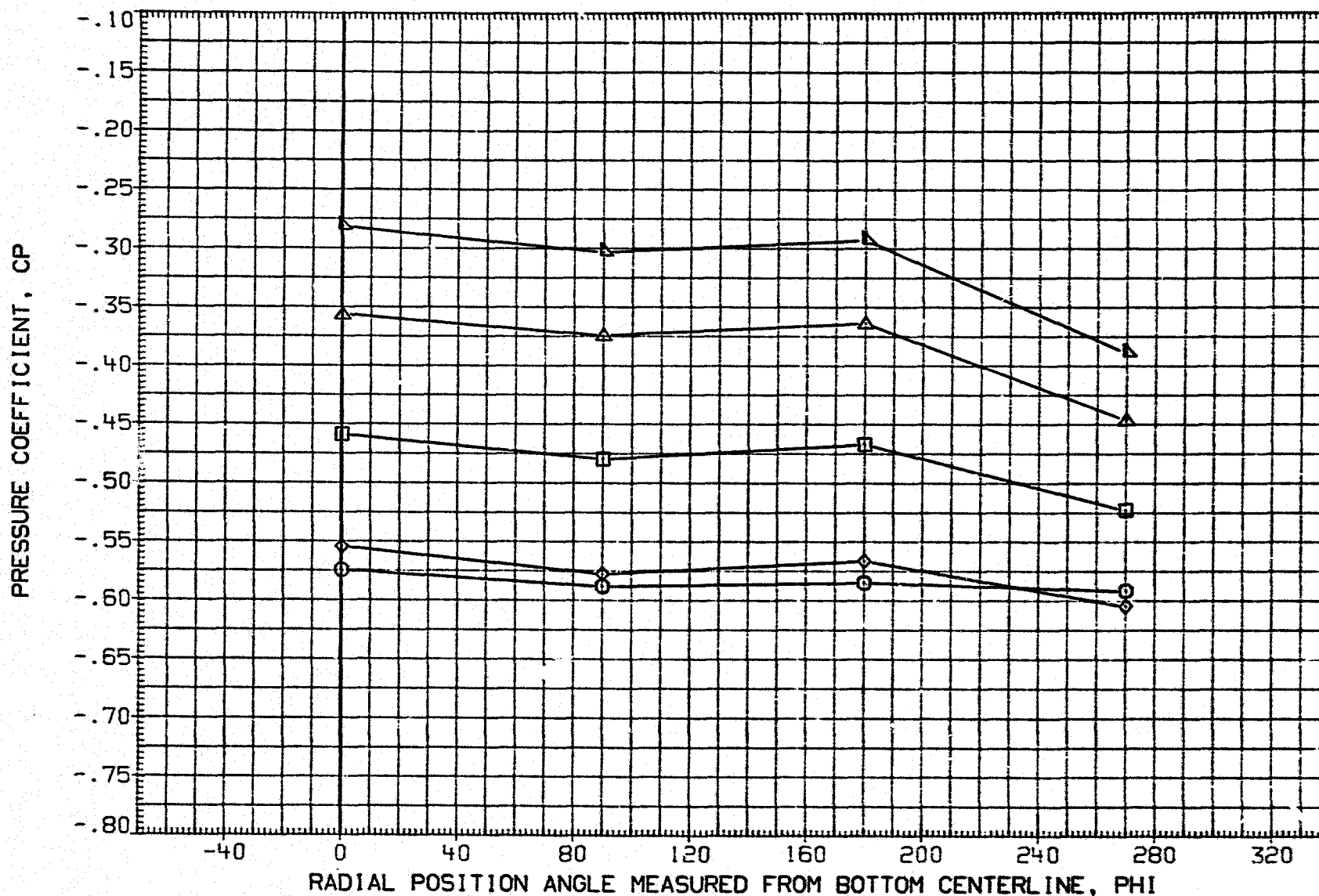


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = -4.000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-OB	MACH	RN/L
(AE4130)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.100	4.250
(AE4122)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4125)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4108)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4103)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	1.100	4.250

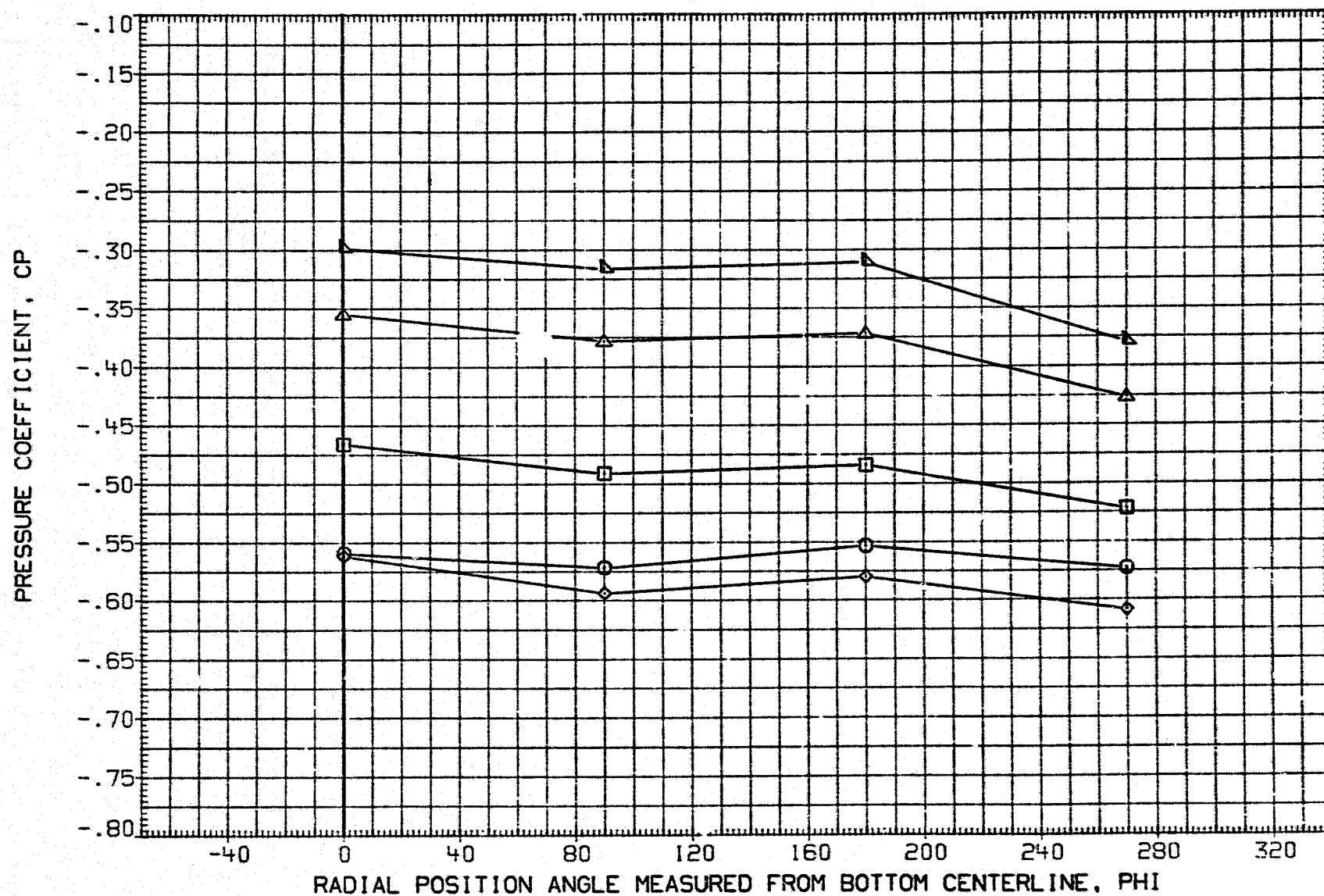


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = .000 XE/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-18	ELV-08	MACH	RN/L
(AE4130)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.100	4.250
(AE4122)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4125)	◇	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4108)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(AE4103)	▽	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.100	4.250

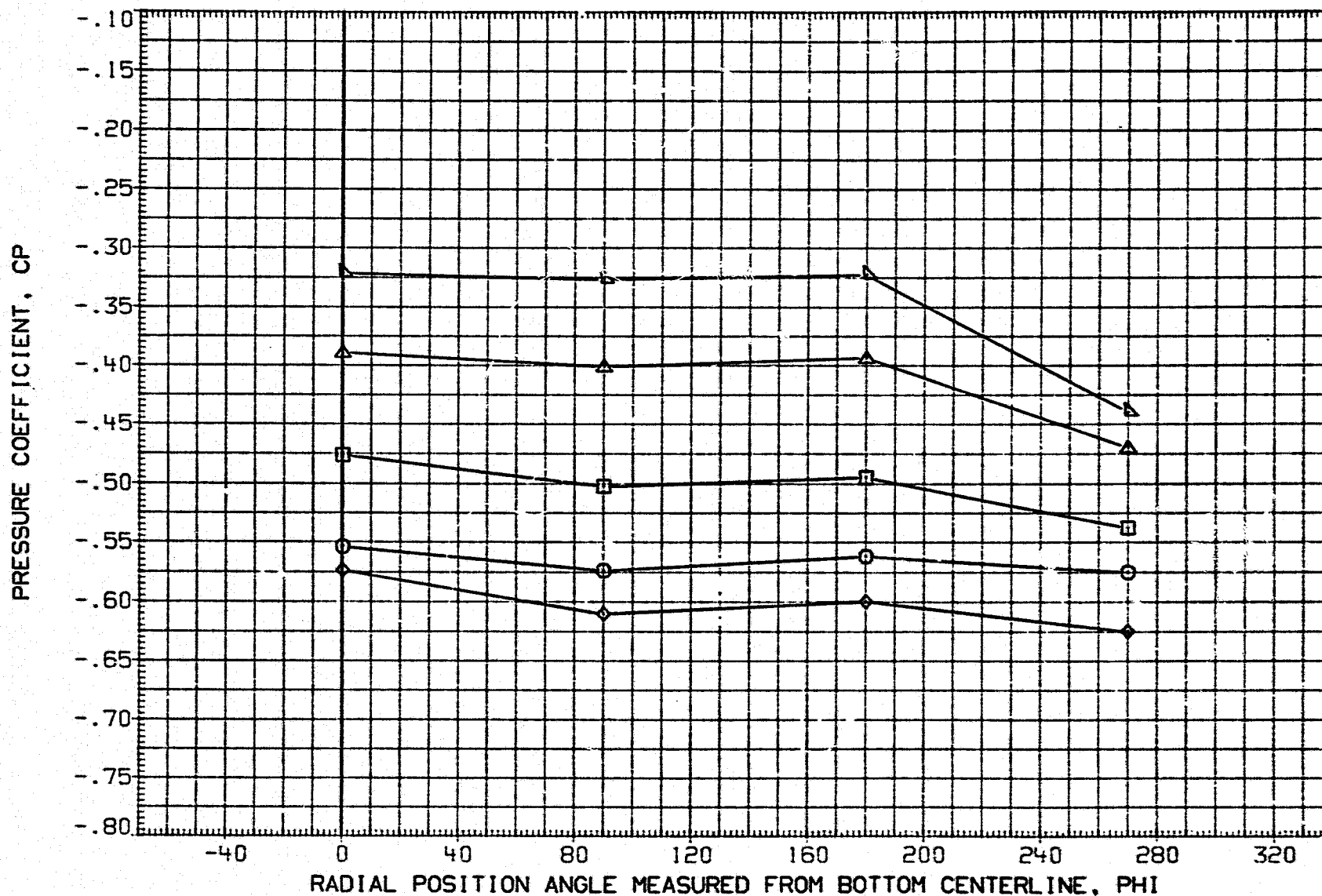


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = 4.000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-1B	ELV-0B	MACH	RN/L
(BE4130)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.100	4.250
(BE4122)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(BE4125)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(BE4108)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.100	4.250
(BE4103)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	1.100	4.250

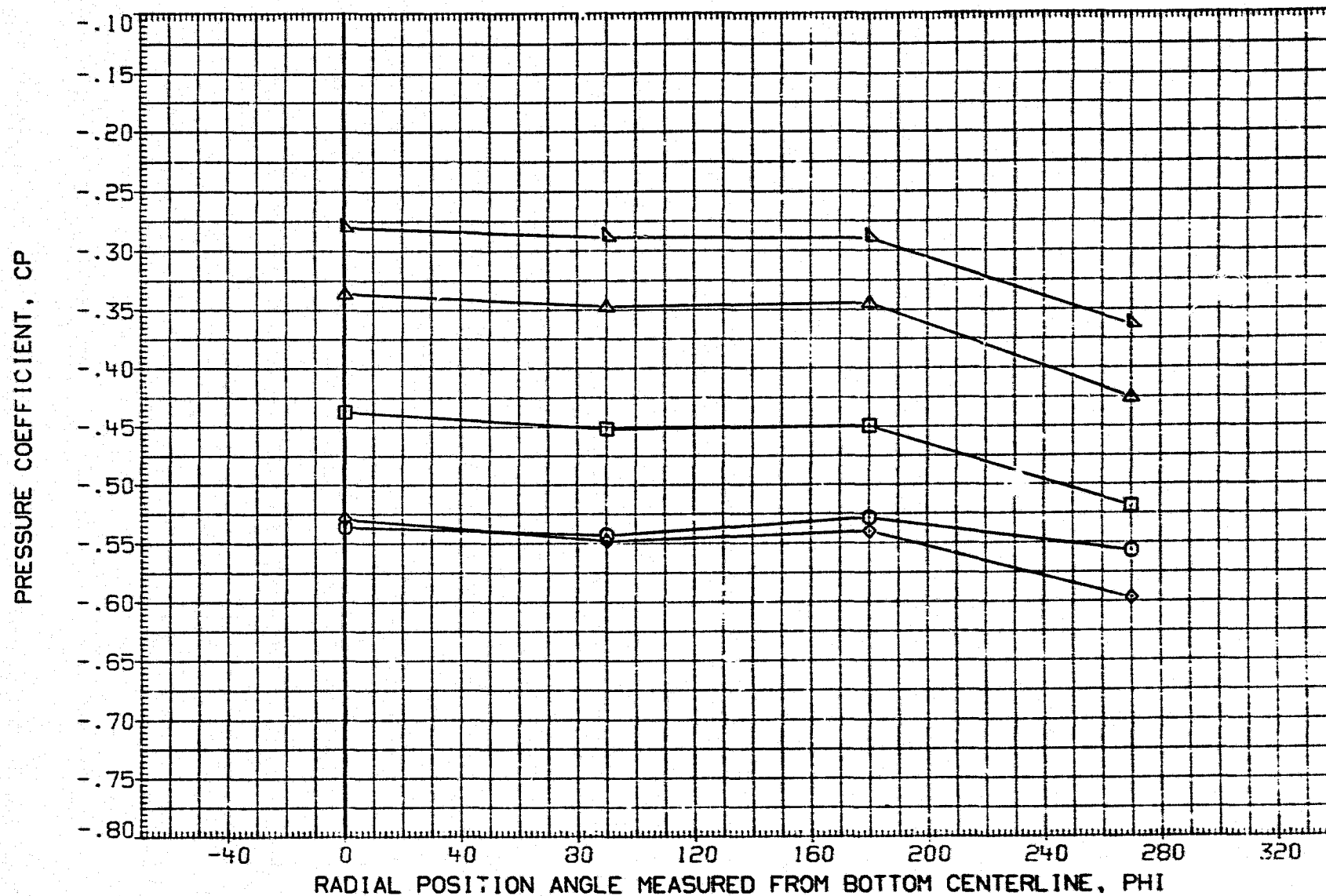


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = -4.000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4130)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	.000	.000	1.100	4.250
(BE4122)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.100	4.250
(BE4125)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	.000	.000	1.100	4.250
(BE4108)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	.000	.000	1.100	4.250
(BE4103)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	.000	.000	1.100	4.250

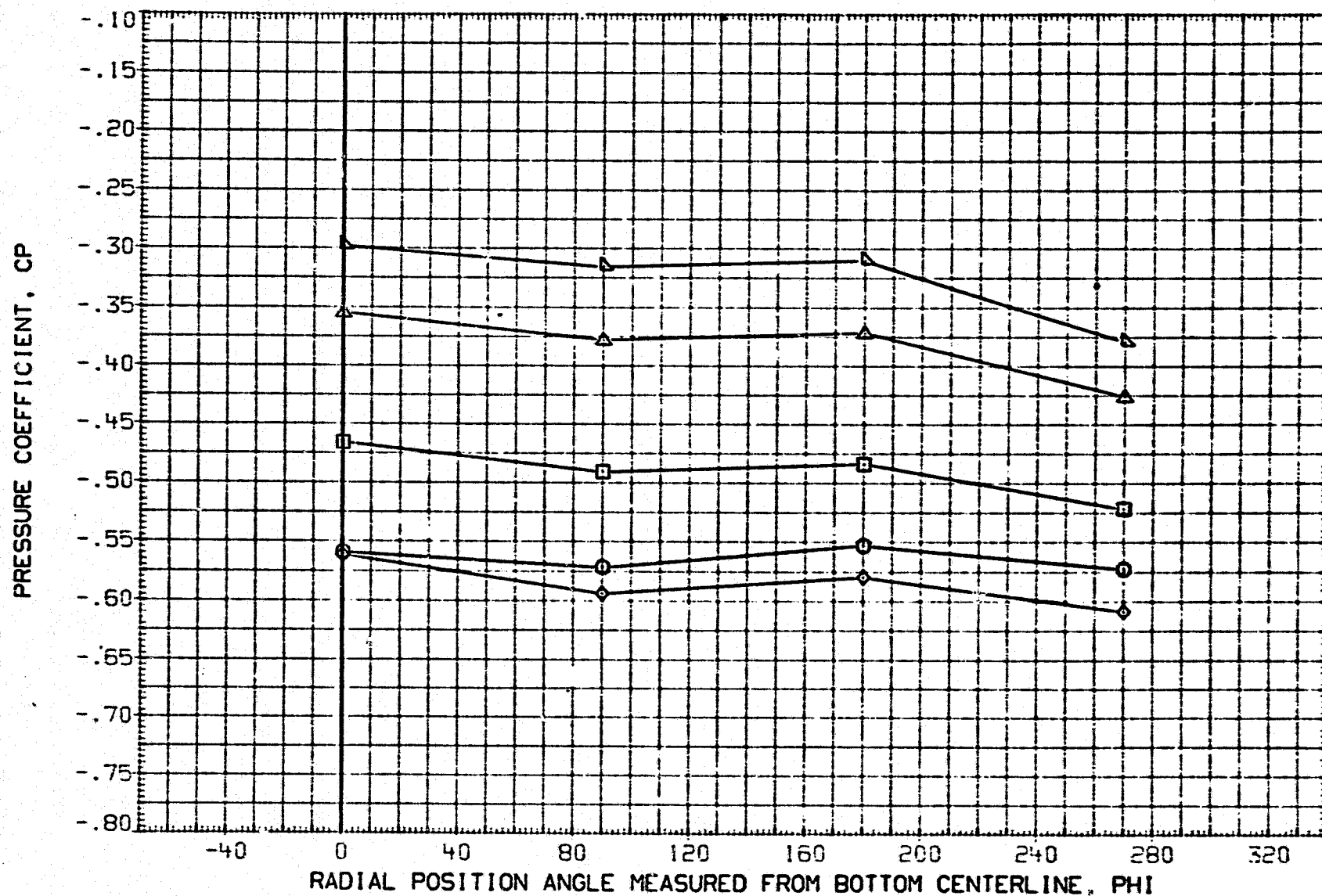


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4130)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	.000	.000	1.100	4.250
(BE4122)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.100	4.250
(BE4125)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	.000	.000	1.100	4.250
(BE4108)	△	ARC11-0231A30 OTS(SRB=N+ ORB=N)	.000	.000	1.100	4.250
(BE4103)	▽	ARC11-0231A80 OTS(SRB=N+ ORB=N)	.000	.000	1.100	4.250

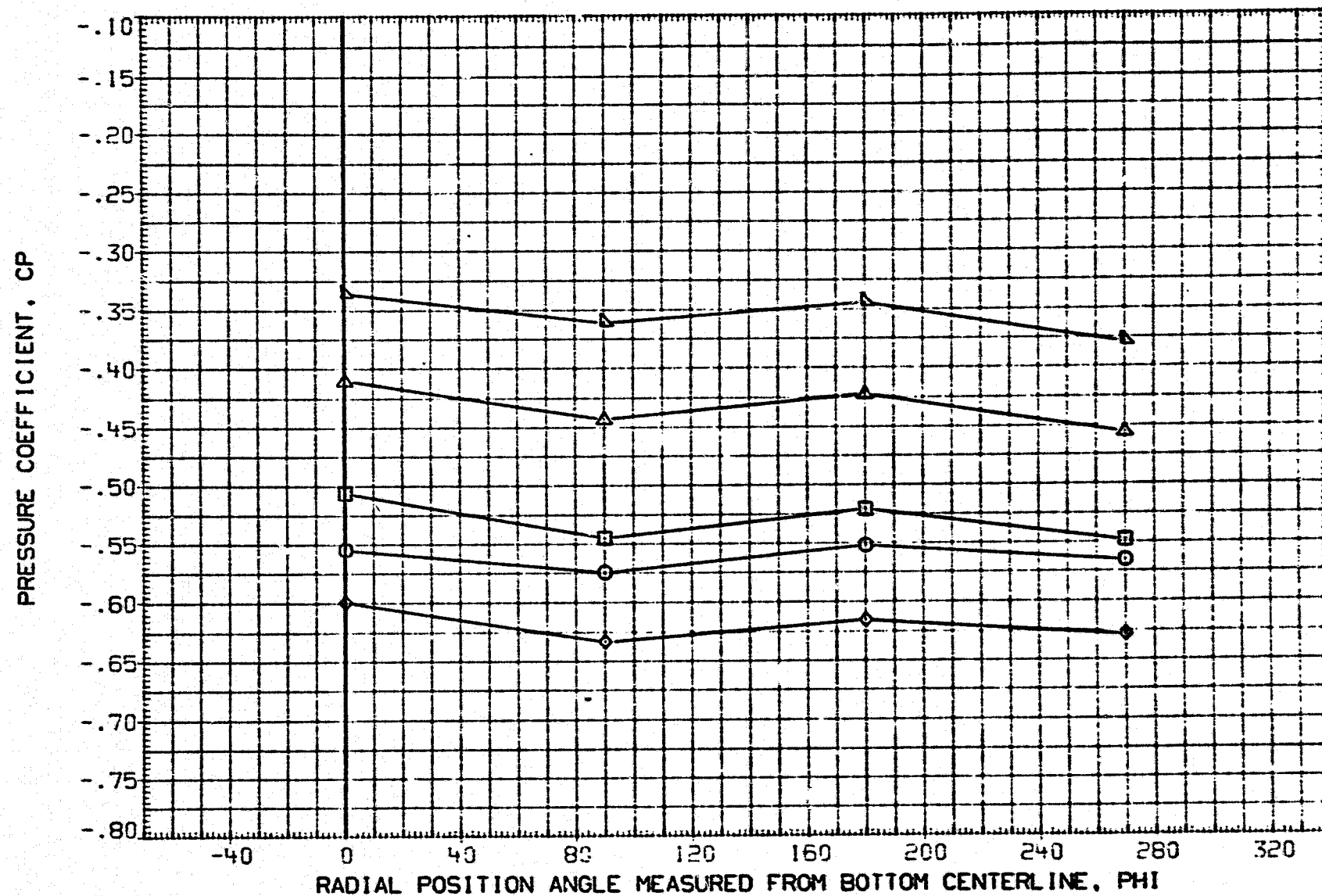


FIG. 137 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.1

ALPHA = .000 BETA = 4.000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
1AE4131	○	ARC11-0231AB0 OTS(SRB=OFF CRB=OFF)	SRB SKIRT	.000	.000	1.250	4.250
1AE4123	□	ARC11-0231AB0 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
1AE4126	◇	ARC11-0231AB0 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
1AE4109	△	APC11-0231AB0 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
1AE4104	▽	ARC11-0231AB0 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	1.250	4.250

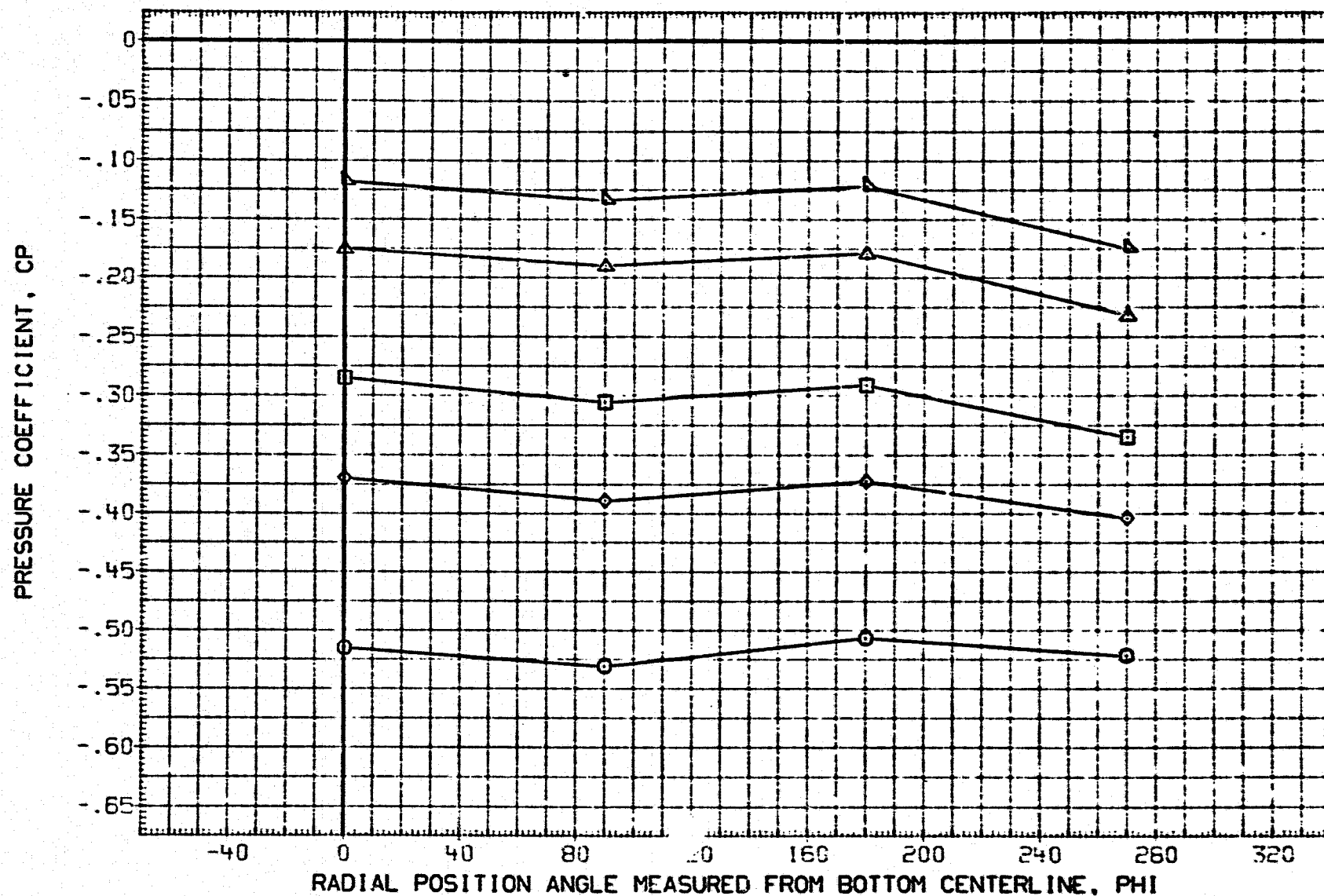


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-OB	MACH	RN/L
(AE4131)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.250	4.250
(AE4123)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(AE4126)	◇	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(AE4109)	△	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(AE4104)	▽	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250

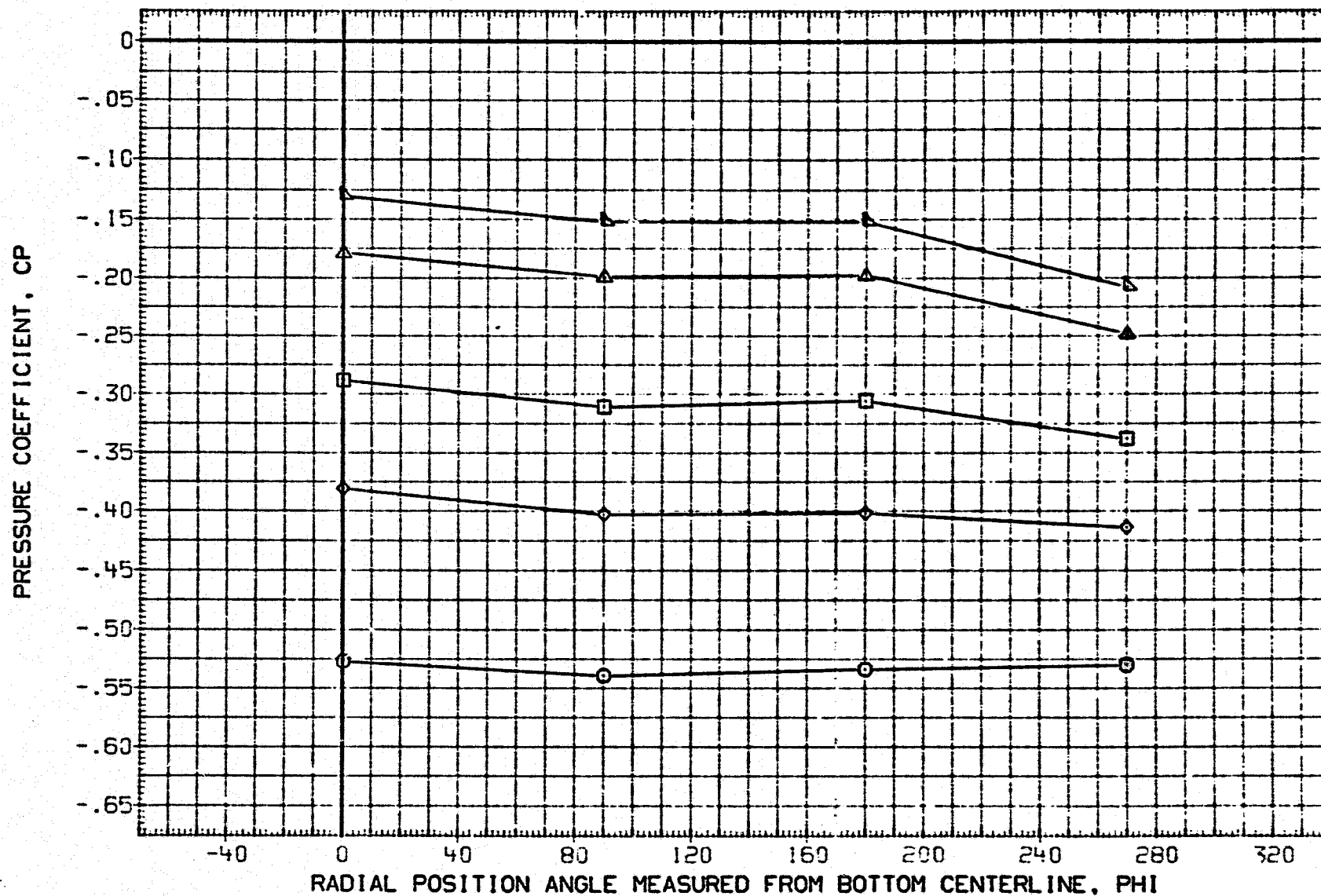


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = .000 XB/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(AE4131)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.250	4.250
(AE4123)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(AE4125)	◇	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(AE4109)	△	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(AE4104)	△	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250



FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = 4.000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	RN/L
(BE4131)	○	ARC11-0231AB0 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.250	4.250
(BE4123)	□	ARC11-0231AB0 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4126)	◇	ARC11-0231AB0 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4109)	△	ARC11-0231AB0 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4104)	▽	ARC11-0231AB0 OTS(SRB=N** ORB=N)	SRB SKIRT	.000	.000	1.250	4.250

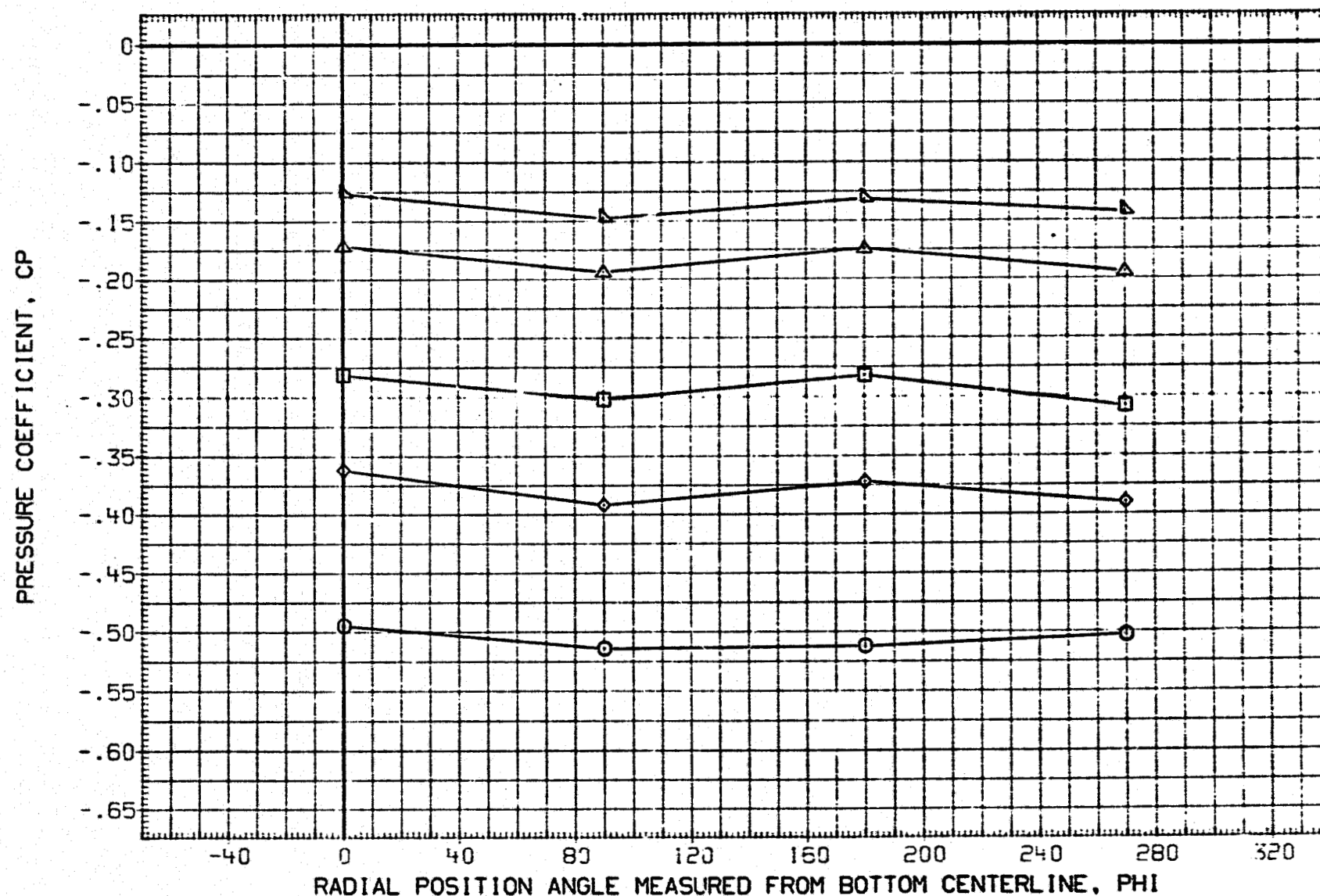


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = -4.000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(BE4131)	○	ARC11-1231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.250	4.250
(BE4123)	◇	ARC11-1231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4126)	◊	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4109)	△	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4104)	◻	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250

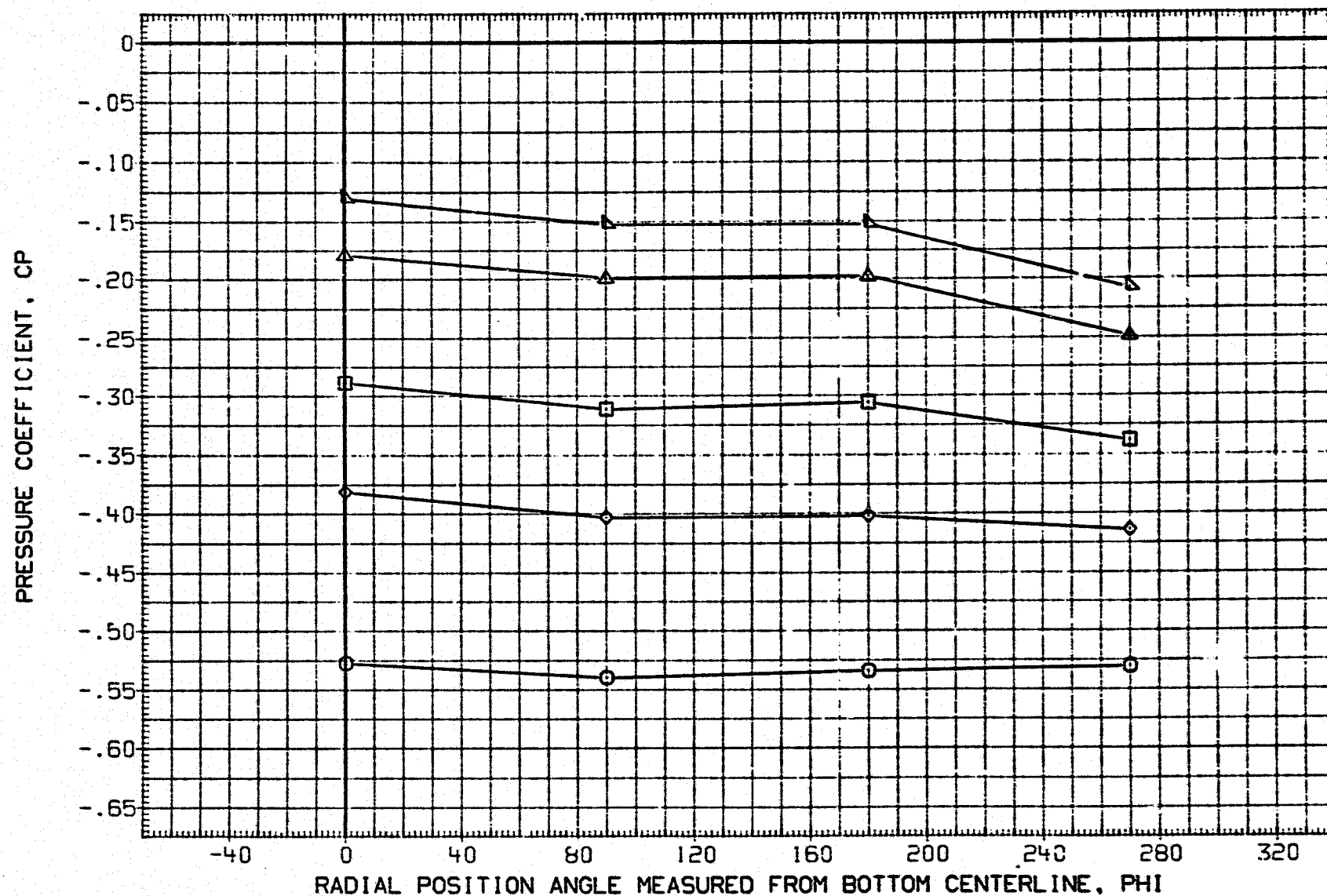


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MACH	RN/L
(BE4131)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.250	4.250
(BL4123)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BL4126)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BL4109)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.250	4.250
(BE4104)	▽	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.250	4.250

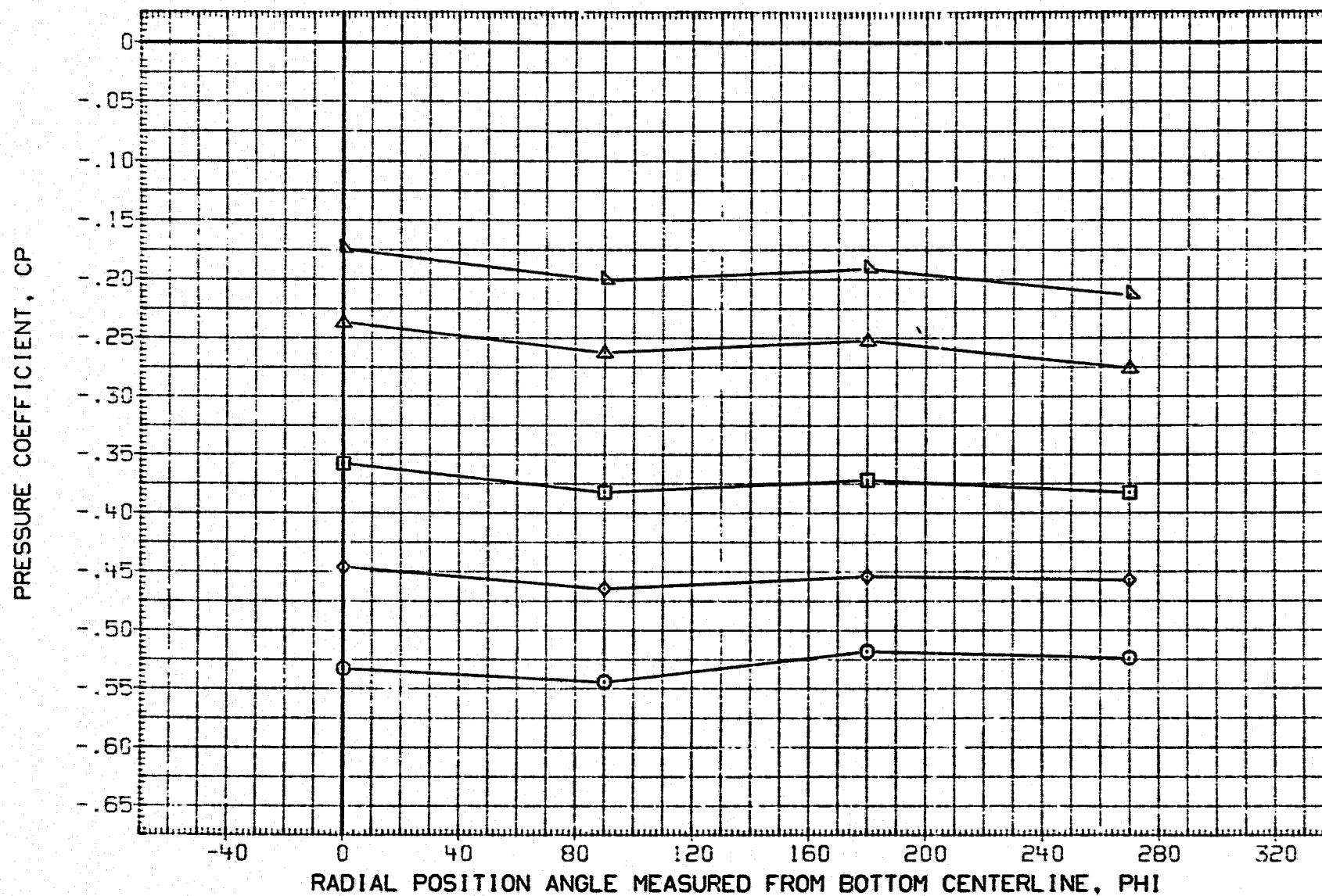


FIG. 138 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.25

ALPHA = .000 BETA = 4.000 XB/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-IB	ELV-OB	MACH	RN/L
(AE4132)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.400	4.250
(AE4124)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(AE4127)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(AE4110)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(AE4105)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	1.400	4.250

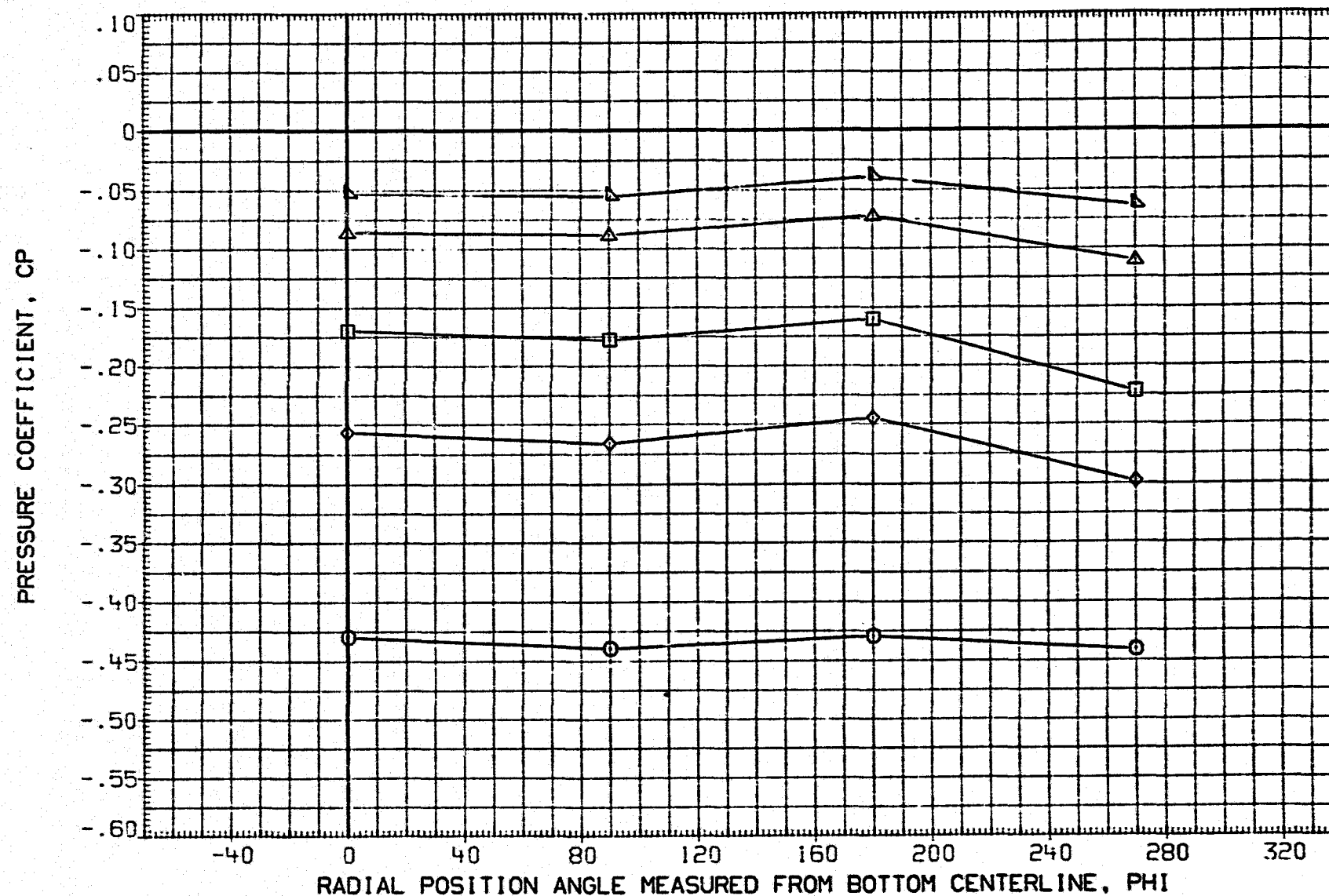


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(AE4132)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	.000	.000	1.400	4.250
(AE4124)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.400	4.250
(AE4127)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	.000	.000	1.400	4.250
(AE4110)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	.000	.000	1.400	4.250
(AE4105)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	.000	.000	1.400	4.250

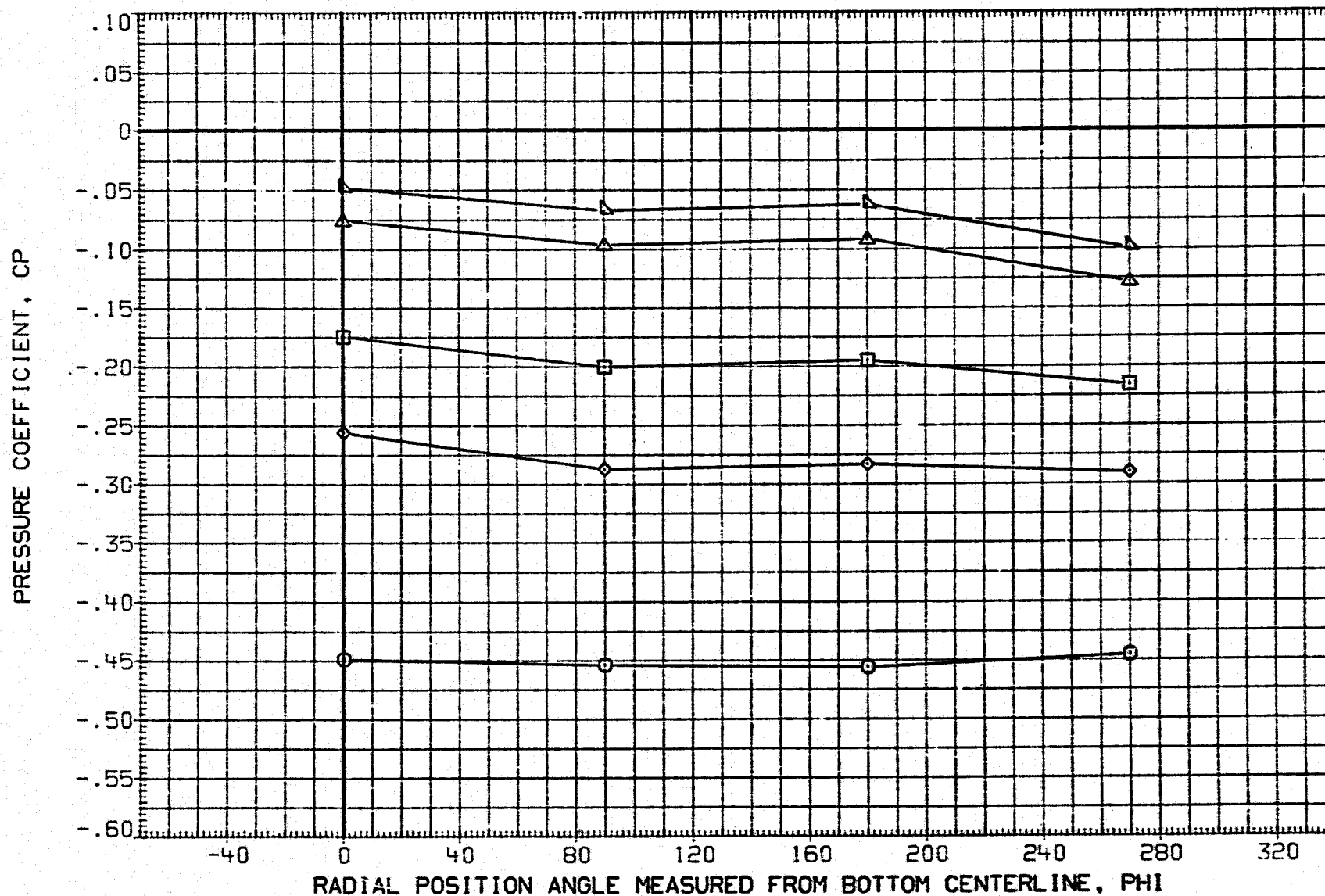


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = .000 XB/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELV-IB	ELV-OB	MACH	RN/L
(AE4132)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.400	4.250
(AE4124)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(AE4127)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(AE4110)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(AE4105)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	SRB SKIRT	.000	.000	1.400	4.250



FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4132)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	.000	.000	1.400	4.250
(BE4124)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.400	4.250
(BE4127)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	.000	.000	1.400	4.250
(BE4110)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	.000	.000	1.400	4.250
(BE4105)	▽	ARC11-0231A80 OTS(SRB=N++ ORB=N)	.000	.000	1.400	4.250

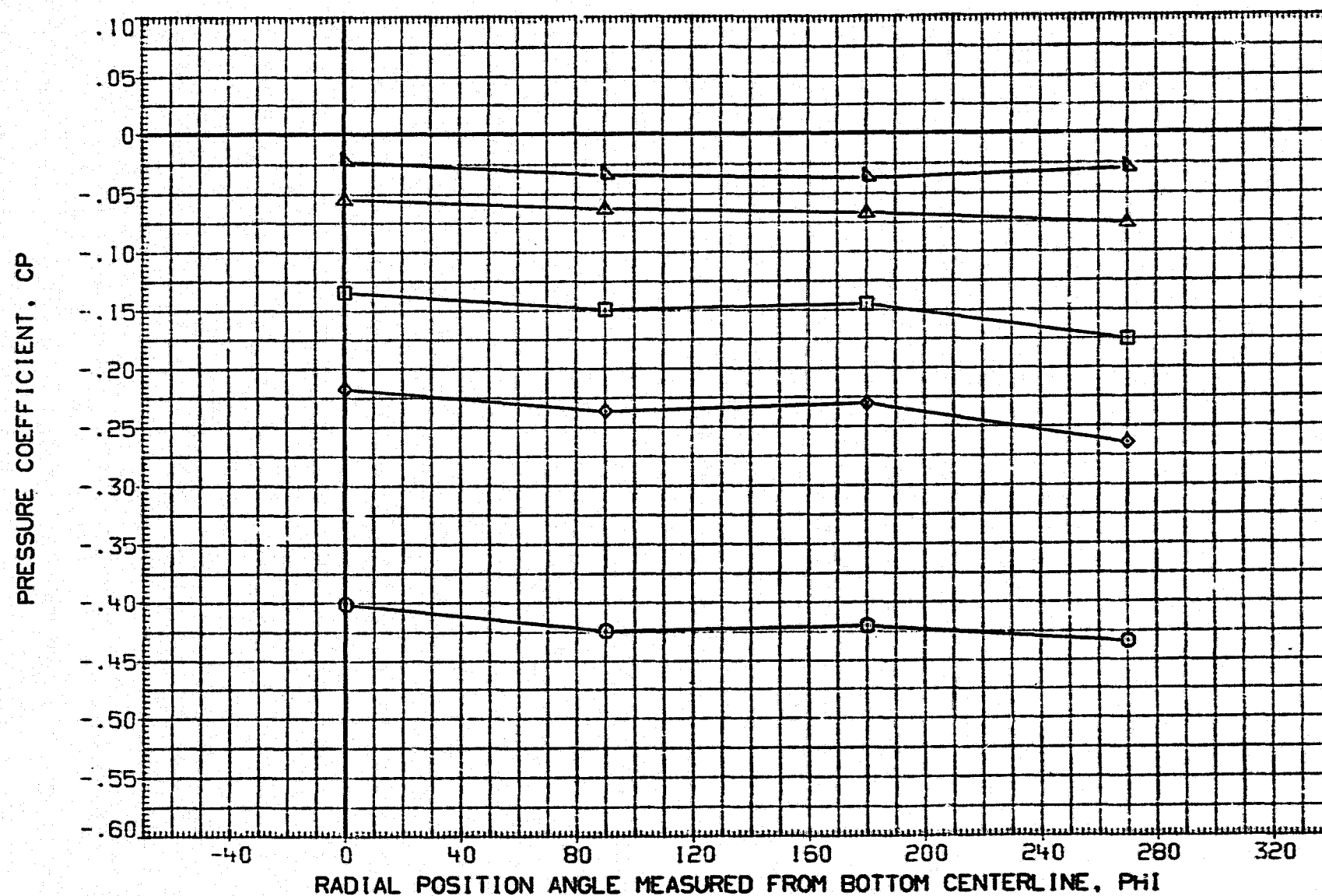


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = -4.000 XB/LB = .950

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	SRB SKIRT	ELV-1B	ELV-0B	MAC-1	PN/L
(BE4132)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	SRB SKIRT	.000	.000	1.400	4.250
(BE4124)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(EL4127)	◇	ARC11-0231A80 OTS(SRB=N- ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(BE4110)	△	ARC11-0231A80 OTS(SRB=N+ ORB=N)	SRB SKIRT	.000	.000	1.400	4.250
(BE4105)	▽	ARC11-0231A80 OTS(SRB=N** ORB=N)	SRB SKIRT	.000	.000	1.400	4.250

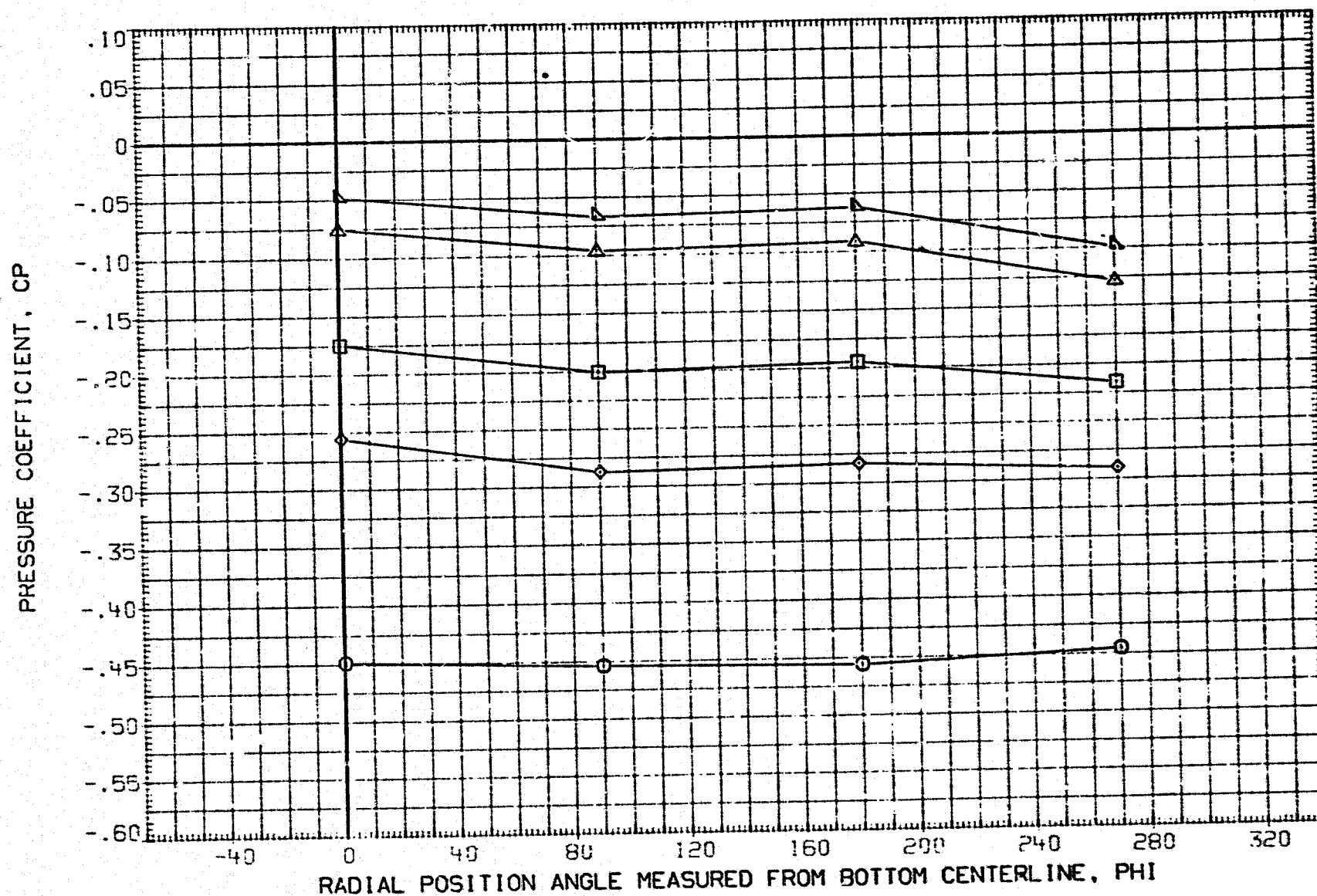


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = .000 XB/LB = .950

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELV-1B	ELV-0B	MACH	RN/L
(BE4132)	○	ARC11-0231A80 OTS(SRB=OFF ORB=OFF)	.000	.000	1.400	4.250
(BE4124)	□	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.400	4.250
(BE4127)	◇	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.400	4.250
(BE4110)	△	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.400	4.250
(BE4105)	▽	ARC11-0231A80 OTS(SRB=N ORB=N)	.000	.000	1.400	4.250

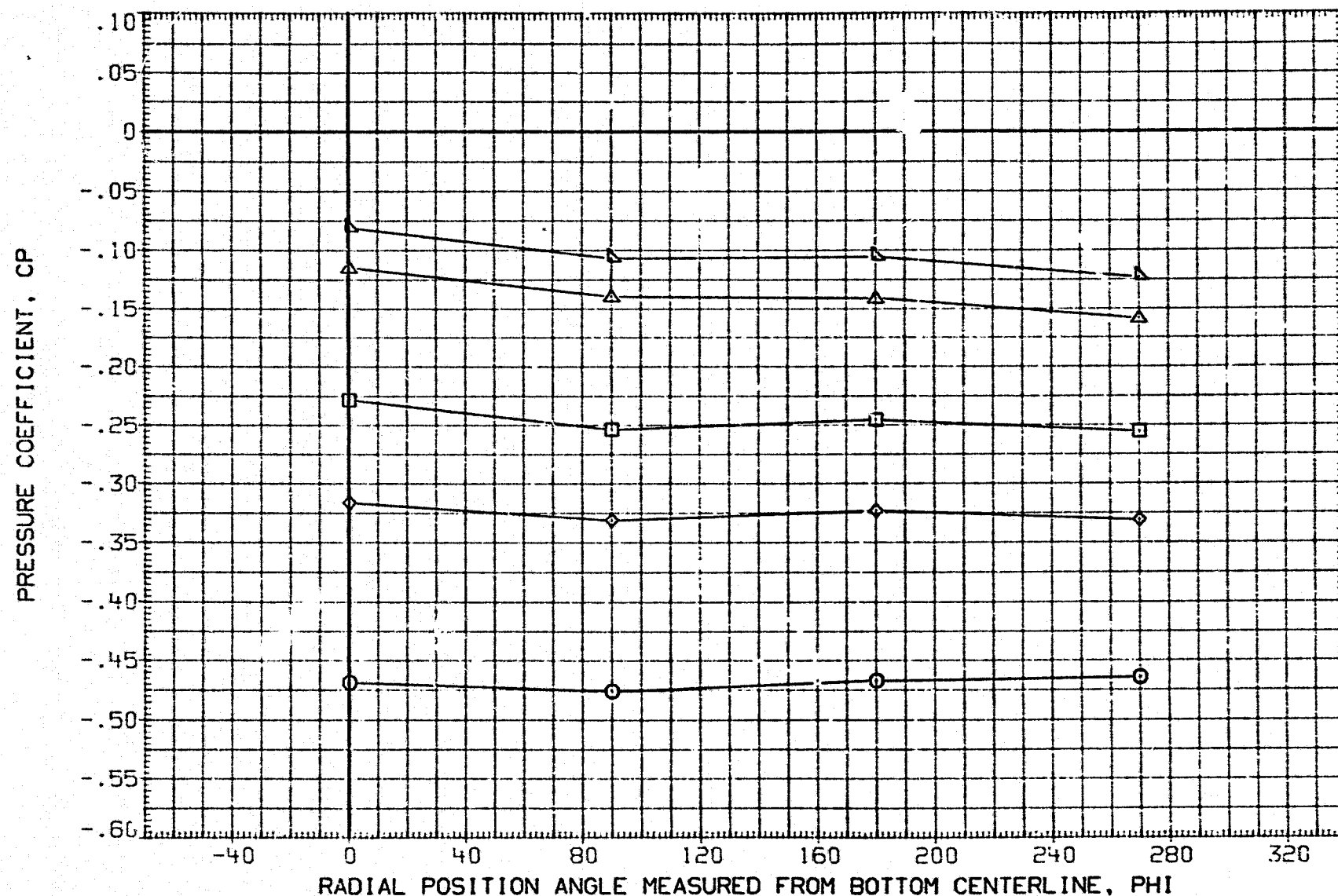


FIG. 139 PLUME EFFECTS ON SRB BASE PRESSURE COEFFICIENTS, MACH=1.4

ALPHA = .000 BETA = 4.000 XB/LB = .950

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